INDIANAPOLIS
SEP 8 1930
PUBLIC LIBRARY

ESTABLISHED IN 1872

PAPER TRADE JOURNAL

With Which Is Combined

PAPER

Vol. XCI, No. 9 Thursday, August 28, 1930

Grand Jury Investigates Northwestern Pulp

Affairs of Company Under Scrutiny Following Failure to Begin Construction of Plant For Astoria, Ore., As Promised—Proposed Mill Was Outlined In Company's Prospectus and Never Materialized—Involunatary Petition Filed In Federal Court Asks That Company Be Adjudged Bankrupt

[FROM OUR REGULAR CORRESPONDENT]

PORTLAND, Ore., August 25, 1930.—The affairs of the Northwestern Pulp and Paper Company, which has been in financial tangles the past year or more, after failure to start construction of a promised mill for Astoria, Ore., are now under scrutiny by a special grand jury appointed to sit in Portland, the week of August 18.

Following closely on news that this jury was investigating the affairs of the company, an involuntary petition was filed in federal court on the first day asking that the firm be adjudged bankrupt.

Governor Norblad recently asked Attorney-General Van Winkle to look into the affairs of the company and L. A. Liljeqvist is now in Portland as special assistant attorney-general to aid District Attorney Stanley Myers in presenting the matter to the grand jury.

The bankruptcy petition charges that the directors of the Northwestern Pulp and Paper Company have formed another corporation known as the Oregon Sulphite Company and are endeavoring to transfer the assets of the first concern to the latter. Several creditors signed the petition.

The bankruptcy petition also charges that the corporation has allowed a preferred claim through a judgment in the circuit court of $1000 taken by Thomas & Meservey, timber cruisers. The company is said to hold an execution of judgment on the 4000 acres of timber being valued at $50,000, belonging to the pulp and paper firm. The petitioner claims the corporation has made no effort to redeem the property or take up the sheriff's certificate issued to Thomas & Meservey.

The Northwestern Pulp and Paper Company was formed about three years ago. Capitalization was authorized as $2,000,000 of 7½ preferred stock selling at $100 per share, with 100,000 shares of common to be included as bonus in sale of the preferred. It is said that about 200 shares of this common stock at $10 a share was sold in the brief history of the campaign.

The proposed mill outlined in the prospectus of the company never materialized and about a year ago, the first activity of the state corporation against the company began. The figures in state corporation records show $294,000 stock receipt out of a total stock sales of $390,000, the difference in these two amounts being due to stock sold on time payments.

Allege Dumping of Pulp

WASHINGTON, D. C., August 27, 1930.—The Puget Sound Pulp and Timber Company, Bellingham, Wash., has filed a petition with the Treasury Department, alleging the dumping on the American market of pulp from Sweden, Canada, Finland, Norway and Germany.

While no official statement has been given out by the Department, it is understood that the company alleges that the pulp is being sold in the United States at less than the cost of production.

No exception is being made in connection with this petition. It will follow the regular routine business, it was stated at the Department. That consists of an investigation to see if the facts presented justifies a complete investigation. If this is found to be the case, the foreign agents of the Customs Service are asked for cost figures and other data in the country complained against. Following the complete report, a hearing is generally held at which time all interests are invited to be heard. The whole process takes months of time to complete and it will, therefore, be a long time before any definite decision is arrived at in this case.

Unloading Russian Pulpwood at Albany

[FROM OUR REGULAR CORRESPONDENT]

ALBANY, N. Y., August 26, 1930.—Since the movement of Russian pulpwood started to the local port terminal, more than 2,000 freight cars have been loaded with the product for consignment to the mills of the International Paper Company in Northern New York. During the past week, an average of 58 cars daily were loaded, bringing the total number for the week up to 346 or about 8,000 tons of the imported product.

A number of other ships bearing cargoes from Russia for the mills of the International Paper Company, are being relieved in New York City, from which point the product is being forwarded to the Port of Albany, in barges. It was found that the Deeper Hudson channel was not sufficiently wide enough to allow the vessels to make the trip here.

Crown-Williamette Declare Regular Dividend

PORTLAND, Ore., August 23, 1930.—Directors of the Crown-Williamette Paper Company, on August 14, declared the regular quarterly dividend of $1.75 per share on the first preferred stock, payable October 1, to holders of record September 13. The directors also declared the regular quarterly dividend of $1.50 per share on the second preferred stock, payable the same dates. This was the annual meeting and besides the regular routine business, all officers and directors were re-elected.

Pennsylvania Paper Mills Expand Production

Schedule of Operations Is Increasing and Should Assume Normal Proportions Towards Middle of September—Business Shows Improvement In Practically All Branches of Paper Industry—Wrapping Paper Division Particularly Active

[FROM OUR REGULAR CORRESPONDENT]

PHILADELPHIA, Pa., August 25, 1930.—While the trade is gradually assuming a more normal late summer demand there is growing optimism of the near future and what may be expected of Fall business. In all branches of the trade business has shown an improvement, with the greatest activity in the wrapping paper division, which broadens as manufacturers begin autumn schedule of production. Many lines of industry that have been more or less dormant throughout the first half of the year are now on the way to improvement and with more interest shown in coming Fall needs paper demand is increasing accordingly. Competition continues keen, despite the growing demand, sizable orders are secured only with hard effort as consumers are still prone to continue purchases to needs of day to day consumption.

Manufacturers in this section are preparing for expansion of operations and are now engaged in increased schedule of production. Little may be expected in the way of full time working forces until orders assume normal proportions but there is every evidence that the tide has turned for both mills and distributors and that by mid September there will be an increase in operations of from 10 to 15 per cent. While the mills have been receiving a larger number of orders the tendency in the trade has been to confine paper requirements to day to day buying which the paper merchants must meet in the slowly advancing paper markets. Manufacturers report continued competitive bidding on the part of mill men just as the paper distributor is obliged to meet similar conditions and while inclined to steady prices they still must meet some recessions in contract buying for the next few months by the larger concerns.

Fine Paper Markets Steadier

There has been a pleasing aspect to the fine paper division, with improvement increasing steadily as the smaller printers and publishers are now in the market for more frequent small orders. The bright spot in the fine paper branch is the steadier tone in prices and the frequent inquiries that are now being made for near future deliveries.

Now that publishers can continue without fear of inroads on profits by their more prominent competitors in the Metropolitan trade they are ordering their paper supplies in the usual volume under longer term contract, and at the same values of the late summer of 1929. Better grades of bonds, ledgers and writing papers, as well as all grades of covers and book papers, are slowly getting into swing with the rising curent of business. Paper box manufacturers are now in the market for larger volume of fancy covering that will be used in conversion of holiday boxes and by manufacturers who have been inclined to prepare for the Fall revival of mercantile trading and for the coming Christmas season.

Paper Bag Situation Improves

Other trade products in the coverting branch of the industry that were hard hit in the early months of the year now showing improvement are bags used by the grocery and food industries where the prices of kraft interferred with the stabilization of the market. As bags were adjusted to the kraft market the local industry was confronted with disturbing factors that gave the distributors little hope of solution until the kraft situation had cleared. Now that krafts are steadier and prices do not fluctuate from week to week the bag manufacturers are advancing their products five per cent and look for stabilized prices with possible further rise in the early days of autumn.

Another hopeful sign which points to the revival of business in the paper industry is the growing order for paper stock which has been noted in the wholesale waste paper industry of this city. Large wholesalers of paper stock report that orders are coming from all over the country and there has been notable improvement in the markets as shipments broaden. The better grades of paper stock are the most active, but commoner lines have been likewise active after a prolonged spell of dragginess throughout the summer. Though orders broaden, prices are holding at lower levels.

Wood Pulp Rates Protested

In answer to the informal complaint made by the Port of Philadelphia Ocean Traffic Bureau regarding the higher freight charged by the Scandanavian American Conference to Philadelphia over Baltimore and Norfolk on wood pulp, Robert C. Lee, of the American Scantic Line, answered the board calling attention to the lower handling cost of this particular commodity at the lower Atlantic Seaboard ports but continued his answer with an explanation which suggested possible reductions in rates here. The Ocean Traffic Bureau of Philadelphia through former Congressman George Edmonds, took up the matter of the higher freightage charged for woodpulp to this sport by the Scandinavian American Conference in the late spring time, when the rates were announced and placed the matter in the hands of the United States Shipping Board at Washington after protesting to the Conference and to the Board on the filing of the higher freightage with the Shipping Board by the lines involved in the transportation of the woodpulp to the Port of Philadelphia.

The American Scantic Line is one of the steamship companies involved in the protested rates and its action in the matter may lead to equalization of the rates along the entire Alantic Seaboard by the various ocean traffic concerns interested in the Scandanavian American Conference. In explaining his attitude on the freight charges to the port of Philadelphia, Mr. Lea of the American Scantic Line states: "It may be of assistance to the board's consideration of this matter to know that we have received some assurance of probable reduction in cost of handling, and regardless of whether this assurance materializes or not, it is our purpose to offer our shippers the same rates next year to all ports in these contracts where a differential now exists. We wish to emphasize, however, that this is being done purely from a policy reason, since we feel it is better to maintain the good will of the various localities and seek their assistance in equalizing costs rather than attempting to do it through rates."

The matter of adjustment of rates is now before the Shipping Board and will be taken up with the Scandanavian American Conference which submitted its freightage charges under agreement with the companies interested and engaged in the shipping srvices between Scandanavian ports and American ports of Boston, New York, Philadelphia, Baltimore and Norfolk, and shipping considerable tonnage of pulp wood from the Scandanavian peninsula. The agreement on rates that were submitted last spring was made between eight companies engaged in ocean traffic between northern Europe shipping points and the Atlantic seacoast ports.

National Patent Reed Co. Moves

Removal of the plant of the National Patent Reed Company from Connecticut to Philadelphia headquarters has been completed and the company now is engaged in the manufacture of paper reed

specialties, paper twines, cords, and allied lines used by furniture manufacturers and other industries. The firm has secured 50,000 square feet of space in the building at the northeast corner of 3rd and Somerset streets, where it occupies the large floor space that provides for extension of business in the Quaker City. The National Patent Reed Company has been operating for fifteen years at Unionville, Conn., where the plant specialized in twisted reed fibers used in furniture manufacture, baby carriages and allied products. The head of the firm is Earl W. Twitchell, who entered the trade before the World War and who served over-seas, returning after the Armistice to Philadelphia, and opening a general paper business at 9th and Chestnut street, later removing to the Lafayette Building, where he conducted a wrapping paper, reed and paper twine agency while conducting the plant at Unionville.

Container Corporation of America to Build

An additional structure will be added to the plant of the Container Corporation of America at Manayunk, where are located the Eastern board mill and container plant of the corporation. There will be erected a storage building which will be constructed at a cost of $25,000. Several additional buildings have been built on the site since the Container Corporation of America took over the mills and plant of the Philadelphia Paper Manufacturing Company including several buildings.

National Waterproofing Co. Increases Lines

Among the local manufacturers of paper products now enjoying a livelier market and with business at normal pace is the national Waterproofing Company, with executive offices in the Drexel Building and plant in Camden, N. J. The head of the firm Isaac Collins, its president and general manager, announces the addition of Indented paper with water proof coating which is a regular waterproof duplex paper but using Kraft-one side, and Indented paper on the other. It makes a durable water proof paper with cushion. It is being consumed by such firms as require car linings and case linings and by manufacturers of furniture, picture frames, china, glass ware, metals of all kind, cabinets, refrigerators and other lines. The new paper has been called "Kushionrap." The National Waterproofing Company is preparing to extend its production on reinforced waterproof paper with cord running through its texture used for interlining purposes.

Cherry River Paper Co. Appoints Superintendent

Following the recent death of Charles B. Brooksbank, manager of the Cherry River Paper Company mills at Richwood, Va., there has been announced an appointment of his successor who will be employed as a superintendent of production and mill management. The new superintendent is George N. Snyder, who has been engaged as general superintendent of the mills. The new appointee is a former member of the staff, connected with the company for the past fifteen years, and was assistant to the deceased manager. Announcement of the appointment of the new manager was made through the Philadelphia offices located in the Pennsylvania Building, where are conducted the executive headquarters of the Cherry River Paper Company, under direction of Vice President and General Sales Manager Clark H. Morian.

Paper Manufacturers Co. Markets New Stay Paper

Following the completion of a most proficient plant development for the manufacture of gum sealing tapes, the Paper Manufacturers Company, with extensive building facilities at 5th and Willow streets, has made further announcement of additions to the gummed products which it will market permanently. The latest addition is a stay paper, to be known as "Kraft-Weld", which is a marked progress in the manufacture of these grades. The Kraft-Weld is made specially for box makers and is also adapted for other uses of allied character. It is a gummed kraft that is treated with the highest quality of glue, specially treated to give instantaneous adhesion, and which welds the edges together similar to the welding of iron or steel and has extraordinary durability. It is used in manufacture of set up boxes chiefly although it can be applied to reinforcing edges where such purposes are desired. The new kraft stay papers are produced in extra heavy kraft of 90 lb. grade. It is also adapted for corrugated products, cartons, is used in Quad machines, and can be applied to use in the manufacture of papeterie boxes and by manufacturing stationers where a durable stay paper is used. The Paper Manufacturers Company is planning to distribute the Kraft-Weld through paper distributors in various parts of the country and is now lining up jobbers for both its gummed sealing tapes and the newer products. The firm having recently entered the gummed tape business on extended scale is further to develop its gummed paper department by the addition of flat gummed papers used by the printing industries and allied trades and for general uses.

Thomas M. Royal and Co. at Bakers Convention

Plans for the exhibit of the lines of cellophaned window bags used by the confectionery and bakery trades will include a display of the latest of converted products at the National Bakers Convention to be held in Atlantic City the week of September 20. The firm has been enjoying one of the most prosperous years of its business history since the introduction of these cellophane window bags which are made for high-grade display and container covering for many lines of food products, including the baking industry. President Thomas M. Royal, who has been summering in Switzerland accompanied by Mrs. Royal, will return to his desk on September 15. Vice President and General Manager Gordon H. Friend will attend the Bakers Convention and direct the exhibit, assisted by Sales Manager Edward Hamilton.

William Van Horn Passes

William Van Horn, who for more than eleven years has been connected with the Boston office of Thomas M. Royal & Co., bag manufacturers, with a mammoth plant located at 7th and Grange streets, in this city, passed away in the Massachusetts Metropolis in the early days of the month following a sudden breaking of the artery at the heart—a rare injury to the blood circulation system. Mr. Van Horn was 49 years of age. He had been in recent years manager of the Boston headquarters.

W. F. Woodward Joins Seaman Paper Co. Staff

W. F. Woodward has become associated with the Philadelphia offices of the Seaman Paper Company, Atlantic Building, as assistant to Wayne Ash, who is now manager of the Quaker City headquarters. Vice President Willard Pringle, who upon his return from Europe this summer after a world tour that extended six months, and who for many years was manager of the Philadelphia headquarters, is now covering the eastern territory, as eastern sales manager with main offices in the Chanin Building in New York, and is making semi-monthly visits to the Quaker City headquarters.

R. M. MacDougal Joins Dupont Cellophane, Inc.

R. M. MacDougal has become attached to the Philadelphia offices of Du Pont Cellophane, Inc., with local branch in the Liberty Title and Trust Building, as local sales representative and assistant to Manager V. C. Clark. He will cover the Philadelphia territory and is in temporary charge of the offices in the absence of Manager Clark, who is on vacation.

Battenville Paper Mill Sold

GREENWICH, N. Y., August 26, 1930—At an auction held here this week the Battenville Paper Mill was sold to Bert Hyatt for $9,500. Mr. Hyatt is the principal stockholder in the defunct concern and it was said that he was the only bidder. The mill has not been in operation for some time although it is reported in good condition. The new owner said that at present he has made no plans regarding its use although there is a strong possibility that it will again be utilized for manufacturing purposes.

Ontario Paper Manufacturers Fairly Active

Fine Paper Mills Generally Running Close to Capacity, Although Some Plants Are Experiencing Difficulty In Securing Large Tonnages—Book Paper, Ledger, Writing, and Bond In Excellent Request—Board Mills Operating Lightly

[FROM OUR REGULAR CORRESPONDENT]

TORONTO, Ont., August 25, 1930.—The month is closing with only a small volume of business in wholesale pulp and paper circles in Ontario, but the results have not been disappointing. In some cases, sales kept up fairly well considering the presence of the holiday season and not a few of the merchants declare their total sales this month to have been satisfactory when considered what was expected. Business conditions in all lines in Ontario are still slow, but the stage is being set for good business in the fall and while it is not likely that there will be a revival of trade on a large scale, the feeling is that things are undoubtedly going to show a healthy improvement. In no department of business is this impression more evident than in the wholesale paper trade. Of course, quiet business conditions have interfered with the sale of both fine and coarse papers, but there has been enough turnover by wholesale paper houses to keep things going nicely during a naturally dull season and there is a confident feeling abroad that the fall is going to produce a strong and healthy revival.

The mill trade continues fairly active considering the holiday season and while some of the fine paper mills are experiencing some difficulty in placing tonnages of size, others are running close up to capacity. There is a fair all-round demand for book, ledger, writing, and bond papers, while on the other hand, a slight falling off in the call for coated stock is observable. Coating mills have not been so busy of late and find orders coming in rather slowly. The between-season demand for catalogs and direct-mail advertising may have something to do with this. The light weight paper market is keeping up quite well and there are no complaints from manufacturers of tissues, toilets and specialty lines. The paper converting trade continues quiet, although envelope manufacturers are fairly busy. General stationery lines are moving slowly and the same may be said of glassine, grease proof and waxing paper lines. Both the paper board and the paper box industries are operating lightly and the waste paper and rag market is none too strong.

Of Interest to Paper Producers

Arthur A. Cole, special mining engineer of the T. & N. O. Railway, delivered an address at Kirkland Lake, Ont., a few days ago on the Freeman process of recovering iron pyrites. This discovery promises to be of great importance to the paper and mining industries of Northern Ontario. The process is a development of comparatively recent date and is expected to do away with sulphur imports to Canada. Mr. Cole referred to the pyrites burner, invented by Horace Freeman, of Three Rivers, Que., and said that the latter had proven that the sulphurous acid gas, used extensively in the manufacture of paper, can be secured from iron pyrites, deposits of which are to be found extensively in Northern Ontario. At the present time sulphur in a raw state is brought into Canada to the value of $3,000,000 annually from the southern United States. If this substitute can be manufactured successfully in Canada, as well as providing magnetic iron as a by-product, it would mean a lot to Canadian industry, said the speaker. "The Freeman process, using iron pyrites," said Mr. Cole, "has now passed the experimental stage and produces sulphurous acid gas cheaper by this burner than by one now in use, where raw sulphur is used.

"The pyrites, formed of two atomic weights of sulphur to one of iron, are blown into a rectangular furnace, four by six feet in dimension, through the top in a swirling motion. The furnace is first heated to a temperature of 1,800 degrees by oil and once ignited, the sulphur in the pyrites continues to burn, giving off heat and the desired gas. The little pellets of iron drop to the bottom of the furnace and should any sulphur be enclosed in them, the heat causes the sulphur to burn. The resultant gas escapes by explosion and leaves a residue of magnetic iron. The sulphur gas is then passed through tubes under water and is cooled and purified, while the hot gas is being generated at the rate of one pound to every pound of pyrites used. This steam goes to other parts of the mill for commercial uses, five per cent of it being used to run the apparatus in reducing the pyrites. Paper manufacturing plants are keenly interested in this process and are awaiting assurance that the supply of iron pyrites is sufficient to warrant changing their present equipment. One company that formerly was turning ten tons of brimstone, now uses 20 tons of pyrites and has had good results for the past two months. The largest deposits in Ontario are now believed to be at the Aldermac Mine, near Cheminis, while the cooper ore at the Noranda Mine is believed to have sufficient quantities for millling purposes."

Paper Milk Containers Being Considered

A number of the big Canadian dairy companies are considering the feasibility of replacing the glass bottles used by them with paper or pulp containers. Investigation by one of the largest companies indicate that the paper bottles augment the milk loads by 33 1/3 per cent, and as the bottles can only be used once, the argument is advanced that great sanitation results can be expected. No pick-up charges are incurred as the bottles will be discarded instead of returned to the distributors. Use on a commercial scale has not yet been started, the chief problem at the moment being the net cost of paper containers in comparison with the glass bottles. Made of a mixture of mechanical pulp, the formulae of which have been carefully guarded, the new bottle is said to have many features to recommend it to milk companies and to the general public.

Experiments along similar lines have been carried on recently in the United States, although the bottle utilized is made of a coated paraffin coated paper. The Canadian product has passed certain tests to demonstrate its feasibility in use for distribution to the homes of milk consumers. T. M. Moisan, president of the Standard Paper Box Company, Montreal, which will manufacture the new container, states that production will start within three weeks. He refused, however, to quote relative prices with the glass bottles now in use by the various companies in Canada.

The subject of paper or pulp milk bottles is one of active investigation at the present time, and even samples have been considered from Germany. The turnover in cities like Toronto and Montreal, should the new type be generally used, will approximate 100,000 gross daily, combined. It is for this reason that the matter is one of particular interest, considering that the half-pint bottles cost between five and six cents and the quart bottles between six and seven cents, with an average loss of 1¼ per cent for lost and broken bottles, and washing costs .27 of a cent. Glass bottles, however, make on an average of 18 trips before replacement, whereas the new product can be utilized only once.

Work at Once on Abitibi Dam

J. H. Black, vice-president of the Ontario Power Service Corporation, Ltd., and Harry F. McLean, of the Dominion Construction Company, which firm has the contract for the building of

the dam and power house at Abitibi Canyon for the Ontario Power Service Corporation, left Toronto this week for Abitibi Canyon, and immediately on their arrival, work will be started and pushed ahead vigorously. This is one of the major developments in hydro-electric power. It will give 275,000 h.p., with a head of 237 feet. The work will take about two years to complete. Work will be going full blast by the end of the present month and will continue until both the dam and the power house are completed. Meanwhile, this big construction work in Northern Ontario will provide no relief for unemployment in Old Ontario. While the Dominion Construction Company has the $23,000,000 contract, an unofficial warning has gone out that there are a great many unemployed men in Northern Ontario and it was proposed to give these the preference. Twelve hundred men, it was learned, if not many more, will be employed on the Abitibi Canyon dam when the work is going full blast. And it is hardly likely to be going full blast for some time yet.

Most of the work done this year, it is stated, will be in preparation for the real beginning next spring. Two things must be built at Abitibi Canyon before work on the dam can start. The first is a camp for the workmen. The second is a steel cantilever bridge across the canyon. The 300 foot span of steel will bridge the Abitibi Canyon 250 feet above the bed of the Abitibi River. It will replace the light cable bridge strung across the canyon for the use of the surveying parties. The height and the span of the steel bridge are roughly the length and height of the dam —300 feet from bank to bank, and 250 feet high. Four hundred thousand yards of concrete will go into the dam and 400,000 yards of excavation will be taken out for its foundation. The work will take two years or better, to complete.

Improving Canada Paperboard Position

S. R. Armstrong, formerly general manager of the old Temagami Pulp and Paper Company in Toronto, and now manager for the Receiver of the Canadian Paperboard Company, Toronto, is now settled in his new position, and is well satisfied with the progress made so far in rehabilitating the company's affairs. "We are laying out a program of improvements in the various departments of the mills, which is designed to better our operating conditions," he said. "We feel that we are getting a reasonable share of the business that is available. Prices, however, are unquestionably low, and that is a circumstance that makes a reasonably full plant operation essential. That we have been able to maintain this is evidenced by the fact that the financial position of the Canadian Paperboard Company, viewed as a whole, shows a substantial improvement today as compared with that of three months ago."

Forest Fire Now Under Control

All the bush fires in Algoma are now under control, according to word from Sault Ste. Marie, and a check up shows that considerable pulpwood has been lost, although the loss is not so serious as in other districts. A fire on the Ghost River, in which the Puckasaw area, which a few days ago was causing anxiety, was being fought by thirteen men with two pumps, was reported this week to be under control with about 25 acres burned over. It started from a camper's fire, officials of the Forestry Department stated. Two new fires were reported this week, one four miles east of Blind River and the other at Maple Lake, about twenty miles north of Sault Ste. Marie. Both these were under control this week. A heavy rain in the vicinity of the Sault was the first real rain to visit the city in some weeks.

Notes and Jottings of the Trade

G. B. Nicholson, of Austin & Nicholson, pulpwood dealers and lumber manufacturers, Chapleau, Ont., was returned for East Algoma in the Conservative interests in the recent Dominion elections by a large majority. His opponent was the Hon. Beniah Bowman, former Minister of Lands and Forests for the Province of Ontario.

Norman E. Wainwright, president of the Don Valley Paper Company, and family, have returned to Toronto, after a pleasant holiday stay on Georgian Bay.

R. I. Finlay, president of the United Paper Mills, Spadina Avenue, Toronto, is spending his vacation at his summer cottage at Oakville, while H. G. French, of the office staff, is holidaying at Lake-of-Bays, Muskoka region.

Provincial Paper, Ltd., head office, University Avenue, Toronto, has sent out specially illustrated samples of their Oxford Super book paper, with the slogan, "It Can't Help But Print Well."

A fire at Fort William, Ont., recently destroyed a freight shed belonging to the Canadian National Railways, with its contents, including 600 tons of news print paper being transported in 32 freight cars.

Speak Against Russian Pulpwood

[FROM OUR REGULAR CORRESPONDENT]

PORTLAND, Ore., August 26, 1930.—G. M. White, statistician of the Crown-Zellerbach Paper Company, and Edward R. Brown, also of this company, were principal speakers at the weekly Kiwanis club luncheon in Portland, August 20.

Mr. White's subject was the peril of Russian pulp shipments and he pointed out that in 1929, there were 302,900 cords of convict pulpwood shipped from the Archangel section of Russia, to the paper mills in the northeastern part of the United States, and that so far this year 280,000 cords had been contracted for and 1,300,000 cords are said to be ready in Russia for shipment.

Although the embargo against this wood has been removed, Mr. White emphasized what has been apparent in a prominent way for the past few weeks—that northwest interests are going to put up a fight to have the importations. "All organizations in this section must join this fight or the industry will be wrecked," was Mr. White's conclusion.

Mr. Brown spoke briefly of paper mill history in this region and said that the first paper mill on the Pacific coast started 60 years ago in California, eight men being employed in the first plant. At present 85 per cent of the paper mills of the United States is east of the Rockies, Mr. Brown said, while 85 per cent of the timber is west of these mountains. The paper mills in the Portland district now spend $5,000,000 annually, but this payroll will be in danger if convict pulpwood is allowed entry from Russia. He also pointed out that the mill at Camas, Wash., near Portland, spent $6,000,000 in its expansion program last year.

The Kiwanis committee is to consider the matter of lending support to the solution of this pulp problem for Northwest interests.

To Build and Operate Wire Rolling Machines

M. J. Mackay, of the Mackay Wire Works, has licensed the Wisconsin Wire Works, of Appleton, Wis, to build and operate a wire rolling machine under his patents for rolling Fourdrinier wires and other paper mill wires.

Actual tests show that this process increases the tensile strength of the cloth and also increases its resistance to fatigue, and consequently greatly improves the life of a Fourdrinier wire so processed.

The rolling, which flattens the knuckles, gives a nice flat bearing, which, of course, is hardened by the rolling. This gives less friction and wear on the suction boxes than the round sharp knuckle of the regular woven wires, which have the tendency to cut in or score the box, which causes wear and tear on the wire quite rapidly.

Because of its not scoring the suction boxes it does not have that tendency to cling and freeze to the boxes, which is so common in many of the mills. Then again, this same flat surface on the knuckle does not imprint itself into the soft light sheet of paper as the round sharp knuckle of the unrolled wire does, and consequently eliminates the wire mark.

News Print Industry Steadiest In Dominion

Wonderful Showing Made In Comparison With Practically All Other Branches of Manufacture —Canadian Mills Operating At More Than 70 Per Cent While Many Industry Establishments Are Running Down to 50 Per Cent Or Lower

[FROM OUR REGULAR CORRESPONDENT]

MONTREAL, Que., August 25, 1930.—While for many months past everybody has been talking about the depression in the news print industry and discussing all sorts of plans for dealing with the "crisis," the fact is beginning to impress itself on observers that the industry is the most steady and most solid one in the Dominion, and that in comparison with almost any other line of manufacture, it is giving a wonderful showing. While most industrial establishments are running on part time, many with production down to 50 per cent or less of capacity, Canadian news print mills are running at over 70 per cent capacity, and are doing that in the face of an expansion in capacity without parallel in any other industrial enterprise, and in the face of the fact that in Newfoundland, a growing competitor, the news print mills are steadily maintaining capacity production. News print production in Canada in July was 216,978 tons, which was slightly larger than in the previous month, but 12,000 tons less than in July, 1929. Considering the extraordinary depression in business all over the continent, and indeed, throughout the world, it surely is remarkable that in the elapsed seven months of this year, news print production here, at 1,500,341 tons, has only been 40,000 tons less than in the corresponding months of 1929. This reflects a steadiness and strength in the consumption of this commodity which warrants investors taking the long view in optimism regarding the future of the industry, for when general prosperity returns, it is felt that few industries will be in a better position than the news print industry, in view of the manner in which it is weathering the present storm. A half-year review of the export of news print from Canada, gives the following figures for the various countries purchasing from Canada:

	Six months	
	1930 Tons	1929 Tons
United Kingdom	54,268	79,783
Cuba	4,976	5,386
Jamaica	744	551
Argentina	30,387	15,746
Other Latin Countries	2,603	6,183
South Africa	8,225	7,680
Australia	26,145	30,767
New Zealand	11,471	11,328
All other	2,559	953
Countries overseas	141,378	158,377
U. S. A.	1,026,226	1,051,924
Grand total	1,167,604	1,210,301

Canada Power and Paper

As a result of the recent absorption of the Anglo-Canadian and Wayagamack companies by the Canada Power and Paper Corporation, the following directors have been added to the board of the last-named company: Viscount Rothermere, John Cowley, F. J. Humphrey, Frank W. Clarke, James W. Pyke, and Hugh C. Mackay, K. C.

The first four of these directors represent Anglo-Canadian Pulp and Paper and the latter two represent Wayagamack.

Vancouver Kraft Power

The Provincial Water Board of British Columbia has received an application from the Vancouver Kraft Company, for permission to utilize 35 cubic feet of water per second from Rainy River, with which to develop 2,000 h.p. for its pulp and saw mills at Port Mellon, Howe Sound, B. C.

Vancouver Kraft, which is a subsidiary of Columbia River Paper Company of Portland, Ore., took over the Port Mellon plant, started about 20 years ago by Howe Sound Pulp and Paper Company. Since acquiring the property, the company has invested about $1,500,000 in modern machinery and equipment for the 50 tons pulp-mill and, also, the saw mill. The latter shut down several months ago, due to the lumber market situation. The pulp mill, which uses waste from the saw-mill, was also compelled to cease operations. It is expected, however, that the whole plant will resume operations towards the end of the year, when market conditions improve.

Vancouver Kraft owns an old water right for 44.8 cubic feet of Rainy River. This record entitles the company to use the water for industrial purposes in connection with the pulp mill. The additional record of 35 cubic feet will, it is believed, absorb the balance of the stream. This water, however, is being sought for power purposes. Although the company has a steam plant, it proposes to install an auxiliary hydro-electric plant.

New Contract for Powell River Co.

From Vancouver, it is announced that the Powell River Pulp and Paper Company has received contracts for 16,000 tons of paper a year for the *Daily Oklahoman* and the *Oklahoma City Times* newspapers, which were previously supplied from Central Canada and from the Northern United States. This order for news print was placed with Powell River Company, by E. K. Gaylord, general manager of the two newspapers.

Wall Board Sales Increasing

Notwithstanding the general curtailment of building operations, sales of wall board are increasing, and present prospects are that consumption this year will exceed that of 1929, owing to the increasing popularity of the various forms of this product in building operations. Recently, it will be remembered, the Donnacona Paper Company, a subsidiary of Price Bros. & Company, started the production of wall board, and orders received so far are stated to be satisfactory. Other Canadian companies engaged in the manufacture of insulating materials include Gypsum, Lime and Alabastine, Ltd., and International Fibreboard Company, subsidiary of International Paper Company.

Canadian manufacturers now supply about 75 per cent of the rigid wall board requirements of the Dominion; about 20 per cent of the consumption of semi-rigid boards, blocks and blankets, and about 51 per cent of the insulating fillers used in Canadian construction. Rigid wall boards are exported on an extensive scale and at present, Canada has a favorable trade balance in this respect. Empire markets and the United States account for practically all Canadian exports of rigid wall boards.

It has been estimated that during 1929, the value of building insulation consumed in Canada, amounted to approximately $2,700,000, of which rigid wall boards accounted for $1,600,000; semi-rigid boards, blocks and blankets $600,000, and fillers $550,000. Wood fibers and waste are utilized in the manufacture of rigid wall boards, and boards classified as semi-rigid are manufactured of flax and straw.

New Hyatt Roller Bearing Catalog

"The Application of Hyatt Roller Bearings to Pulp and Paper Machinery" is the title of a new pamphlet published by the Hyatt Roller Bearing Company, of Harrison, N. J. This application is subjected to extremely severe service, usually beyond the average capacity of plain bearings which wear rapidly due to the heavy unit pressure developed and because of the contamination of lubricant upon which they depend for satisfactory operation. The pamphlet is profusely illustrated.

You've been thinking of Bird Centrifiners . . . how they can make your paper really clean . . . how they can reduce your seconds . . . how they can make you a profit. In other mills, Bird Centrifiners are making clean paper, are reducing seconds, are making the profit that you hope to make.

BIRD MACHINERY

BIRD CENTRIFINERS

for complete information, write
BIRD MACHINE COMPANY
SOUTH WALPOLE ▲ MASSACHUSETTS

manufacturers of the Bird Centrifiner under license from Centrifugal Engineering & Patents Corp., owners of the Erkensator patents

4176

Activities of Fox River Valley Paper Mills

Ahdawagam Paper Products Co. To Build New Addition To Wisconsin Rapids Plant—Machinery Purchased From Defunct Wisconsin Carton Factory To Be Installed, In Addition To Other Equipment—F. J. Sensenbrenner Honored

[FROM OUR REGULAR CORRESPONDENT]

APPLETON, Wis., August 25, 1930—Building operations are to be started immediately by the Ahdawagam Paper Products Company, Wisconsin Rapids, Wis., in line with the company's intention to expand its carton business. An addition one story in height, 110 by 200 feet, is to be erected of concrete and steel. Machinery recently purchased from the defunct plant of the Wisconsin Carton Company, of Stevens Point, Wis., is to be installed, plus additional new equipment. The total cost of the building and equipment is estimated to be about $90,000.

This new unit will be used for the manufacture of candy and food cartons, display boxes and other light cartons. The company's business was previously confined to heavy carton products. The Ahdawagam company is a subsidiary of the Consolidated Water Power and Paper Company, and the enlarged production will furnish a new outlet for carton material made in the latter's mill.

Freight Rates to be Raised

Freight rates on printing and writing paper from the Fox River Valley mills of Wisconsin to Chicago will be raised from 17 cents a hundred pounds to 20 cents, according to a decision handed down by the Interstate Commerce Commission. The decision was part of a consolidated case involving the general structure of rates on these paper products through central and trunk line territories. Western carriers sought a rate of 21.5 cents on printing paper, but the commission ruled that the present rate was not too low. Some of the rates have been under contention for more than 16 years and the commission now feels that it has made changes that will remove the charges of unreasonableness and undue prejudice. The order is effective November 1, 1930.

Consolidated Mills Make Safety Records

Two of the mills of the Consolidated Water Power and Paper Company are continuing to make history with their safety records. The Biron mill has kept right on with its no-accident policy, and has operated since January 22 without a lost time accident. There are 273 men employed. The Interlake mill at Appleton, Wis., has 205 workmen and has operated since February 16 without a lost time injury. Minor accidents at the Wisconsin Rapids and Stevens Point mills prevented these two from continuing to historic totals. There has not been a fatal accident at any of the Consolidated mills since February 14, 1928.

Wisconsin River's Low Level

Paper mills along the Wisconsin River have been obliged to shut down some of their generators and resort to steam power or commercial current because of the extremely low level of the water. The drought has brought the lowest level since 1925. Several of the northern lakes which serve as reservoirs are already empty and all others are at 43 per cent of capacity. It is expected that full rains will relieve the situation before it becomes too acute.

Pulpwood Operations Continued

Twenty-seven men have been added by the Newaygo Tug Line at Ashland, Wis., to handle the incoming pulpwood for the Consolidated Water Power and Paper Company. The tug has had such favorable weather in rafting pulpwood across Lake Superior that the slip is jammed, and a night crew therefore was necessary. Operations night and day will be continued for some time.

Sievert to Manage M. & M. Mills

Paul Sievert, who formerly was superintendent of the Marinette and Menominee Paper Company, Marinette, Wis., has been promoted to manager of the company's two mills. He succeeds W. W. Hinnenthal, who has become general manager of the International Paper Company's bag factories at Mobile, Ala., and Bastrop, La. The M. and M. Paper Company is a subsidiary of the International.

News of the Industry

Construction is about to begin on the fresh water pipe line of the Nekoosa-Edwards Paper Company, Nekoosa, Wis. The line will be 19,000 feet long, and will convey water from Nepco lake to the company's mills. The pipe will be made of pre-cast concrete and will be 42 inches in diameter. This will be one of the longest fresh water pipe lines in the state.

An extra measure of fire precaution has been taken by the Rhinelander Paper Company, Rhinelander, Wis., by furnishing the city fire department with a master key which unlocks all gates of the mill yards. The key is carried aboard one of the fire trucks. Several blocks of travel will be saved by having access to the yards.

In order to help the movement to save Wisconsin forests from fire destruction, the Wisconsin Conservation Commission is conducting an educational campaign in methods of fighting fires in the woods. Trucks specially equipped with fire fighting apparatus are to be exhibited at all fairs in the state this fall, and an explanation and demonstration given as to just how the work is done. This will help to make volunteer fire fighters more useful when conditions arise such as have been prevalent in northern Wisconsin during the dry season this summer.

Representatives from a number of Wisconsin paper mills last week attended a conference at Lake Geneva, Wis., on "Human Relations in Industry." The gathering is a joint enterprise of industrial leaders and the industrial departments of the Y. M. C. A. It aims to stimulate thought and provide a clearing house among those interested in the question of human relations. Speakers included Ordway Tread, New York; Arthur T. Morey, Granite City, Ill.; Charles M. Mills, Cleveland, Ohio; G. A. Pennock, Chicago; William B. Stout, Detroit, Mich.; W. S. Kendrick, Chicago; L. A. Harley, Akron, Ohio, and Dr. Samuel W. Gfafflin, New York. The Northern Paper Mills, Green Bay, was represented by W. J. Peacock, W. McGrath and M. Heigl; the Fort Howard Paper Company, Green Bay, by A. E. Umberham, W. J. Boucher, L. H. Reidenbach and G. Van Calaster.

F. J. Sensenbrenner, president of the Kimberly-Clark Corporation, Neenah, Wis., has been appointed chairman of the Neenah Committee of the National Aeronautic Association. The organization will sponsor national air races at Glenview, Ill., during the coming week.

The marriage has been announced of Arthur Bouffard, of Appleton, Wis., and Miss Gladice K. Olwell, Green Bay, Wis. Mr. Bouffard is instructor of pulp and paper classes in cities of the Fox River Valley under auspices of the vocational schools.

Stettler Box Co. Takes Temporary Quarters

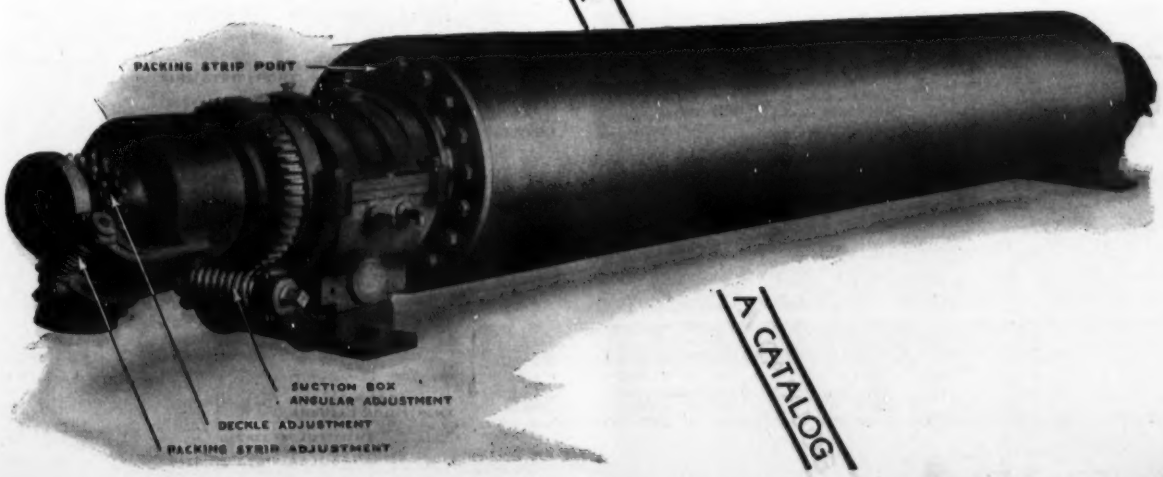
PORTLAND, Ore., August 23, 1930.—The Stettler Box Manufacturing Company, which was recently destroyed by fire in Portland, Ore., has taken temporary quarters at Thompson and Interstate, pending repairs to their own building, which it is expected, will require about four months.

WRITE YOUR NAME AND ADDRESS ON THE MARGIN OF THIS PAGE AND MAIL IT TO US FOR A CATALOG

A news mill repaid the cost of its Downingtown Suction Roll installation at the end of seven months. They installed two rolls in 1925, therefore the rolls have paid dividends for more than four years, and are still running. The design and construction of the Downingtown Roll safeguards the economies derived from the suction roll operating principle. A complete 24 page catalog sent upon request.

Downingtown Manufacturing Co.
Downingtown, Penna., U. S. A.

DOWNINGTON
KILBERRY PATENT
SUCTION ROLL



Brighter Outlook For Paper Trade In Chicago

Local Distributors of Standard Grades of Paper Usually In Heavy Demand During Early Autumn, Are Experiencing Normal Conditions—Demand For News Print Reported To Be Growing—Fine Paper Market Is Stable, Though Spotty

[FROM OUR REGULAR CORRESPONDENT]

CHICAGO, Ill., August 25, 1930—With its eyes to the front the Chicago paper industry is marching into September firm in the belief that business will soon be back to normal. Those grades of paper finding an unusually heavy demand in the early Fall are reporting some condition of normality. Papers for business forms, etc., are holding steady and demand seems to be little affected by other business conditions. News print representatives report demand growing. Business prognosticators in general are urging firms to keep up their advertising budgets above all else. This is going to help many grades of paper.

In the fine paper market all eyes are toward meetings to be held by manufacturers which are expected to give some indication of the trend. The fine paper market here is stable though somewhat spotty. Coarse papers are in the late summer doldrums with jobbers urging their customers to buy now to replenish sadly depleted stocks. These letters, say reports, are having some needed effect. Books and covers are reported firm with no change in prices. Board representatives feel that the price situation will take a change for the better later in the Fall, though they give no special reason why they think so. Waste papers, especially the higher grades, are fairly active.

Paper Stock Dealers to Organize

Waste paper dealers and packers from all sections of the country will meet in Chicago on September 10 to form a national organization. The decision to hold the conference was reached at a preliminary meeting held on August 12 at the Statler Hotel, Cleveland. A trade association is deemed advisable because of the "deplorable condition of the waste paper markets and the development of certain forces that are tending to undermine the structure of the industry," according to reports. The total volume of business handled by the waste paper industry is estimated at over $100,000,000 annually.

The following committee has been appointed to arrange for the conference here: R. W. Joyce, National Waste Material Company, Cleveland, chairman; I. Moutner, Cleveland Waste Paper Company; J. C. Winter, Winter Paper Stock Company, Cleveland; Newell Lewis, Pennsylvania Paper Stock Company, Pittsburgh, and Nathan Kurtz of the M. B. Speer Company, Pittsburgh.

Chicago Paper Salesmen's Activities

The Chicago division of the Salesmen's Association of the Paper Industry held its final tuning up golf tournament in preparation for the big final outing in September on Thursday, August 21, at the Tam-O-Shanter Country Club, Niles, Illinois. On September 18 the entire group and guests will move out to the Wilmette Club to battle with other divisions for the Harbison Trophy and other extra prizes. The Chicago division has won two legs of the Harbison Trophy and is serving notice on New York and other divisions that the Trophy will rest premanently in Chicago just as soon as the last big outing is over. The outing this week at Tam-O-Shanter attracted a number of out of town guests including some from the Twin Cities. One of these representatives, Strow Seaton, of the Acme Tag Company, Minneapolis won the low net prize. Other prize winners included the following: Harold Leahy, LaSalle Paper Company, low gross; Tom Donahue, Riegel Paper Corporation, won the blind bogey; low net for the first nine holes, Charles Roos, National Envelope Company; low net for second nine holes, Bill Lee, of Sealright Corporation and the least number of putts prize was secured by Ed Shaeffer of Missiquoy who used up only 29 putts for the 18 holes. The biggest sensation of the day and one that nearly wrote the days outings on sports pages all over town came when Bill Lee missed holing out his tee shot on a 175 yard hole by only a quarter of an inch. Bill's foresome was certain that the ball had found the cup, so close did it come. And, in this game, a miss seems to be as good as a mile.

News of the Trade

A splendid folder issued by the Eastern Manufacturing Company is creating interest among Chicago buyers of business forms. The cover, with brown foundation and blue and white colors, is headed, "For Speedy Teamwork" and the inside cover contains the story of Atlantic Bond's usefulness for business forms. The folder contains several samples, in a number of colors, of various business forms appearing on Atlantic Bond. A color swatch on the inside flap is also useful. The folder is printed on Atlantic Cover, White, Antique finish.

A broadside illustrating Oxford Mainefold, distributed by Bermingham & Prosser, Chicago, is quite unusual in its size, effectiveness and illustrations. It is being mailed out in an attractive envelope, in colors. The broadside itself announces "Oxford Mainefold takes its place among a distinguished line of coated papers." Four color illustrations of various items printed on Mainefold are included in the broadside and on the second fold where the illustration matches the title "A Scion of Aristocratic Lineage."

The Murnane Paper Company, 218 North Clinton, Chicago, recently sent out a mailing on 20 pound stock featuring a description of Murpaco Mimeograph Bond, "taking mimeograph perfectly and excellent for pen and ink. An illustration, mimeographed, made the announcement further effective.

From its Chicago office at 35 East Wacker Drive the West Virginia Pulp and Paper Company is sending out its price lists on coated papers and on standard mill grades as of August 15, 1930. Fifteen grades are quoted on the standard mill grades and eight on the enamel paper grades.

Paragon Mill & Supply Co. Organized

[FROM OUR REGULAR CORRESPONDENT]

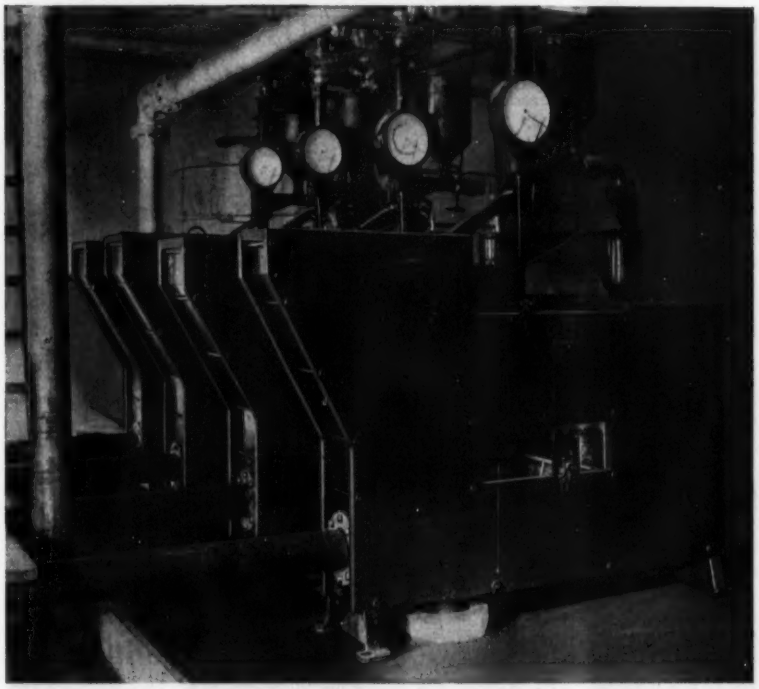
DAYTON, Ohio., August 26, 1930.—One of the new concerns just established in Dayton by men who have long been identified with the trade, is the Paragon Mill and Supply Company, Third and Madison streets.

The company, of which William R. Kemper is president; Theodore Fritch vice-president and treasurer, and Frank Moorman, secretary, is equipping its establishment with a complete mill supply line and reports good success, with prospects for fall much better than had been anticipated, considering the depressed state of business throughout the country.

The incorporators assert that there is every indication of returning prosperity and inquiries received and sales made within a comparatively brief time indicate their predictions will come true.

Messrs. Kemper, Fritch and Moorman for a long period of years were among the chief officers of the Patterson Tool & Supply Company, and are well-qualified by experience in the tool and mill supply business to conduct the new enterprise.

Why Guess Quality
when you don't have to?



WHY have the quality of your paper affected by light and heavy beater dumpings? Why handicap the wet end of your machines with the old problem of fluctuating stock consistencies? Why tolerate irregularities in the quality of your paper when a simple, inexpensive machine—the DeZurick Regulator—can *control* the consistency of your stock before going to the machine.

No power—no attention—is required. Automatically, as *all* the stock passes through the machine (not just a sample), the proper amount of water is instantly added whenever the density exceeds the point of consistency for which the machine is set. A Bristol chart keeps record of the entire day's run. A constant head float controls any variation in water pressure. The entire regulating device is visible.

When you consider the comparatively small investment the machine involves and the really important function it performs—it is easy to realize why it deserves a thorough trial in your mill. The fact that so many other mills have installed *additional* Regulators is proof of its indispensable value. Address your inquiry to the Valley Iron Works Co., Appleton, Wisconsin.

VALLEY

Equipment for Paper and Pulp Mills

New York Office: 350 Madison Ave.
Western Mfg. & Sales Div.: Smith & Valley Iron Works Co., Portland, Ore.
Canadian Representatives: Pulp & Paper Mill Accessories, Ltd., Montreal, Canada

Boston Paper Demand Is of Average Volume

Business Has Been Seasonable and Conditions As A Whole Appear Somewhat Improved Although There Is Much Keen Competition—Conditions In the Paper Stock Market Are Practically Unchanged With A Slight Improvement in Some Quarters

[FROM OUR REGULAR CORRESPONDENT]

BOSTON, Mass., August 25, 1930.—An average volume of paper for the season of the year has moved in the Hub market in the last seven days, with some wholesalers of fine grades reporting a very active demand. Judging from the number of inquiries and actual orders, there has been considerable improvement in the printing industry. Conditions, as a whole, appear somewhat better, although there is much keen competition. It is hoped, however, that with the approach of fall and the likelihood of still more demand, this element of the situation will be somewhat mitigated. The call for wrapping paper is fair. The demand for glassine has fallen off to some extent in the last two weeks but this division of the industry had been experiencing a very lively demand.

Better Inquiry for Board

Inquiries for box board are coming in a little more freely, with some actual orders as a result, particularly on the folding grades, such as single manila and also on white coated, although the demand is not what it should be at this time of the year. Values remain at the same levels.

Paper Stock Market Unchanged

Conditions in the paper stock market are practically unchanged, although there are indications of a certain amount of improvement in some quarters, and a better feeling has developed. One concern that had been buying a carload of stock at intervals has increased the quantity to three carloads. Consumers are carrying little or no material on hand and it is felt that September will see a greater demand. Competition is exceedingly keen at the present time. Some movement in shavings is noted. Prices are unquotably changed.

General News of the Trade

Boston—Carter, Rice & Co. Corporation, Boston agents for the Nashua Gummed and Coated Paper Co., are distributing sample books of the new lines of Nashua Velours made by that company. The books contain many interesting examples of printed and embossed work. The papers are made in eight colors.

The first of the fall series of educational sales meetings of Carter, Rice & Co. Corporation is to be held at the office of the company September 20. Ink, its manufacture and relation to paper, will be the subject, discussed by Mr. Williams, manager of H. S. Prescott, 470 Atlantic avenue, this city.

Tileston & Hollingsworth Company has issued another broadside "from the run of an actual job," a striking poster, advertising a well-known automobile tire printed on Milton Text-India-Wove, 26x40x100M.

John F. Wilson, advertising manager for Carter, Rice & Co. Corporation., left today, accompanied by Mrs. Wilson, for a vacation, including a trip up the Hudson, Albany and Niagara Falls.

John H. Brewer, general manager for Storrs & Bement Co., expects to attend the annual meeting of the Hammermill agents to be held in Erie, Pa.

Thomas N. Fairbanks, of the Thomas N. Fairbanks Company, 270 Broadway, N. Y., importers of hand-made papers for Storrs & Bement Company paid a two-day visit to that firm last week.

James A. Saunders, veteran shipper for Spaulding & Tewksbury Company, has returned from a vacation at Silver Lake, Wilmington, Mass.

A concern in Peabody, Mass., is finishing a new paper product, different from any previously manufactured and made to look like leather. Made up into sheets it resembles leather so strongly that some think it is leather.

National Paper Products Improve Mill

CARTHAGE, N. Y., August 18, 1930.—Previous to the improvements now under way at the plant of the National Paper Products Company, much was done to the branch known as the West End Mill. The latter plant came under control of the National Paper Products Company, in October 1929, when it was announced that construction of a new machine room 76 by 120 feet would be started immediately. The structure is made of brick and steel and holds two paper machines with a capacity for turning out thirty tons of finished tissue paper daily. The old paper machine was overhauled by the Bagley & Sewall Company and entirely rebalanced and fitted with new bronze bearings and a gravity oiling system so that speed was increased from 400 to 800 feet per minute. Both machines at the West End Mill are electrically driven by motors on sectional drives so that the speed is very delicately controlled. The new machine department houses a crane 76 feet long which covers the entire section in handling the heaviest machinery.

Other departments entirely rebuilt include the wet machine room, beater room and engine room while concrete foundations have also been placed under the entire plant. The new concrete foundations have a solid rock support allowing the least possible vibration to the machines when in operation. The machine room is equipped with a steel sash, fractured ribbed glass on the sides, and a skylight on the roof. A fan ventilating system which removes all steam from the building as soon as it comes from the driers is among the features.

It is estimated that the entire project will entail an expenditure of $500,000. The first machine at the West End plant was placed in operation in February 1930, when 125 men were recalled to work. The electrical equipment has been supplied by the Westinghouse Company and the engineering work done by the V. D. Simons Company. The project is the largest carried on in Northern New York in several years and it is expected that it will be completed early in October.

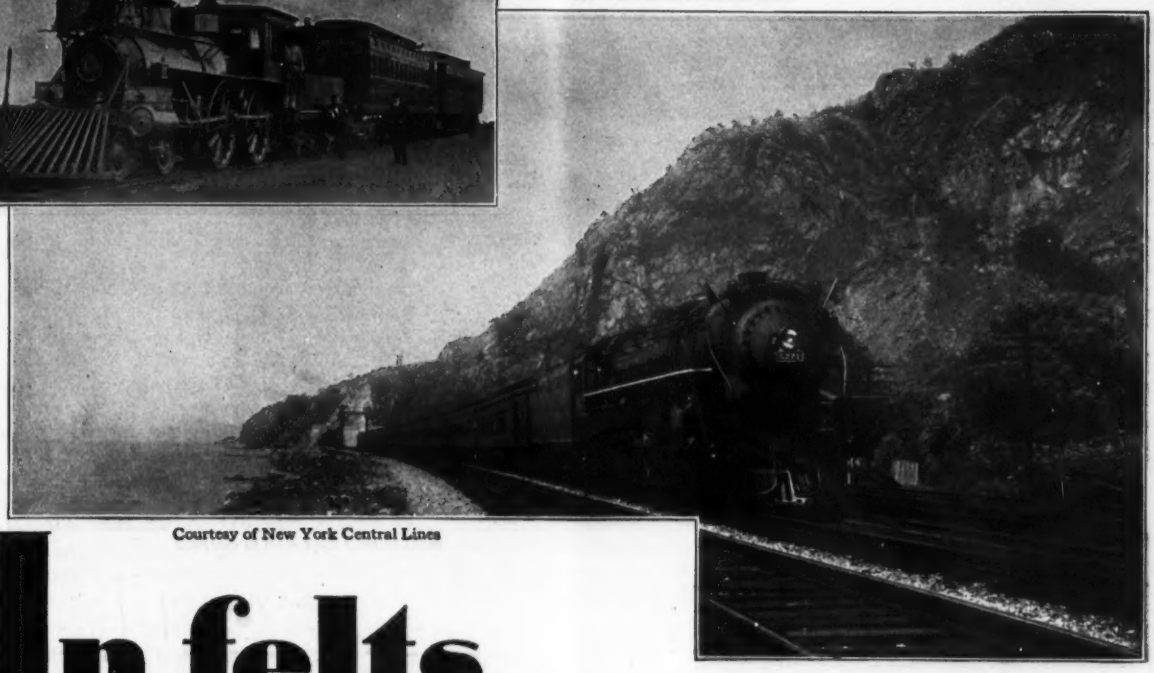
To Spend $20,000,000 on Reforestation

GLENS FALLS, N. Y., August 26, 1930.—The Reforestation Commission presided over by C. L. Fisher, of this place, has issued an important statement in regard to the proposed constitutional amendment providing a long term program for reforestation in New York State. The program calls for expenditure of $20,000,000 over a period of fifteen years and the purchase and reforestating of large acres of idle land in order to create forests in all parts of the state.

Statistics show that about one million acres of land in the state including the forest preserve counties outside the Adirondack and Catskill sections can be purchased for production forest purposes. Under the present constitution, if lands are acquired in forest preserve counties they immediately become a part of the forest preserve and as such are subject to all restrictions which prohibits the cutting or utilization of any timber.

The proposed amendment would permit harvesting of mature timber only on areas purchased and planted with trees in the parts of the forest preserve counties outside the Adirondack and Catskill regions. The Conservation Commission would also purchase and reforest lands in other parts of the state under the amendment. Until the amendment is passed the state will not be allowed to acquire land in Lewis, St. Lawrence or other forest preserve counties.

Locomotive No. 15, formerly the "Tornado," one of the first locomotives to be converted from a wood burner to a coal burner, and operated on the New York and Harlem Railroad.



Courtesy of New York Central Lines

In felts ..

as well as railroads

CLUB car, observation platform, dining car, barber shop, comfortable berths with plenty of clean, white linen, and eighteen hours between New York and Chicago . . .

Certainly a contrast with the train in which Lincoln traveled to Washington. No Pullmans. No dining cars. None of the comforts which every one enjoys today.

But the difference in railroad transportation of today and 75 years ago is no greater than the difference between the first felt that Asa Shuler and J. W. Benninghofen turned out in 1858 and the felts their sons and grandsons are making today.

Time makes many changes. Experience stands back of all real progress.

In back of every Hamilton Felt is the experience of these 72 years. Little wonder that these felts are easy on the coal pile, that they take out water in more than usual quantities, that they wear long, that they combine those diametrically opposed qualities of strength and openness.

To try one Hamilton Felt is to use them always. The check sheets will then insist that you use nothing else. Ask the Hamilton Felt Man for a felt that will exactly suit your machine, product and mill conditions.

Hamilton Felts are marked by two blue lines full width of the felt and by one shorter blue line midway between them.

SHULER & BENNINGHOFEN, Hamilton, O.

The Miami Woolen Mills

Established 1858

Hamilton Felts

Final Program For The Meeting Of TAPPI

Sept. 3, 4 and 5, 1930, Erie, Pa.

Wednesday, September 3, 1930.

9:00 A.M. (E.D.S.T.) Registration, Hotel Lawrence.

10:00 Business Meeting, ball room, Hotel Lawrence:
Amendments to Articles of Organization.
Tentative Standard Testing Methods.
Papers:
1. Vapor Transmission Through Papers, by Allen Abrams and W. A. Chilson.
2. Methods of Determining pH Values of Paper, by B. L. Wehmhoff.
3. Color Matching with the Colorscope, by H. H. Sheldon.

12:45 P.M. Buses leave Hotel Lawrence for General Electric Co.

1:15 Complimentary luncheon at the Erie Works of the General Electric Company.

2:15 Inspection of the General Electric plant.

5:30 Buses leave Hotel Lawrence for boat.

6:00 Boat trip to Port Dover, Ontario. Dinner, dancing, card playing, committee meetings, and entertainment on the boat.

Thursday, September 4.

10:00 A.M. Papers, ball room, Hotel Lawrence:
4. Evaluation of European Pulps, by W. H. Moore and W. R. Willets.
5. British Standard Method of Sheet Making and Testing, by James d'A. Clark.
6. Interconversion of Freeness Scales, by D. S. Davis.
7. Evaluation of Pulp Wood, by Bjarne Johnsen and C. H. Reese.
8. Role of Medullary Ray Cells in Pulp and Paper Making, by G. H. Ritter, F. A. Simmonds and R. M. Seborg.
9. Razek-Mulder Color Analyzer, by Jackson Burgess.

1:00 P.M. Luncheon at Masonic Temple, corner of 8th and Peach Streets.
Address—Foundation for Operation of Modern Management Methods, by L. C. Reynolds.

2:30 Visit to plant of Hammermill Paper Company and group picture.

7:00 Complimentary informal dinner at Lawrence hotel as guests of the Hammermill Paper Company. Speakers.

Friday, September 5.

9:00 A.M. Papers, ball room, Hotel Lawrence:
10. Coagulation Factors in Water Clarification, by F. E. Divine.
11. Influence of Bleaching on Viscosity, by J. H. Ross and L. H. Yustin.
12. Bleaching of Southern Pine Sulphate Pulp, by C. E. Curran, M. W. Bray and R. H. Doughty.
13. Consistency Determination by Absorption of Light, by O. M. Maass, H. W. Johnston and J. S. Hart.
14. Pulping Eastern Hemlock, by W. H. Monsson and G. H. Chidester.
15. Paper Machine Equipment and Operation, by L. M. Yoerg and R. W. Pattison.
16. Air, Heat and Moisture Balance for Paper Machine Rooms, by A. S. Goodrich and H. G. Brehme.

12:30 P.M. Luncheon at Hotel Lawrence.

1:30 Recreational Program and Plant Visitations:
Golf tournament at Lake Shore Country Club. Quoit tournament, horseback riding, bathing, hiking, baseball, etc., at the Presque Isle Peninsula State Park.

6:00 Fish fry and distribution of prizes at Presque Isle.

Note: The following papers of interest will be read by title. If time permits they will be discussed during the meeting.

Automatic Consistency Control in the Paper Mill, by S. E. Meyers.

Continuous Vacuum Filters in Closed White Water Systems, by A. O. Bragg.

Directional Designation in Physical Tests of Paper, by F. T. Carson and L. W. Snyder.

Determination of Chlorine Consumption of Pulps, Pulp Testing Committee.

Isolation of Cellulose by the Chlorination Method, by Pulp Testing Committee.

The Fibrous Raw Materials Committee (formerly the Fine and Special Paper Committee) will devote any available time to the further discussion of acidity, cuprammonium viscosity, copper number, alpha content, rosin and the soda soluble test.

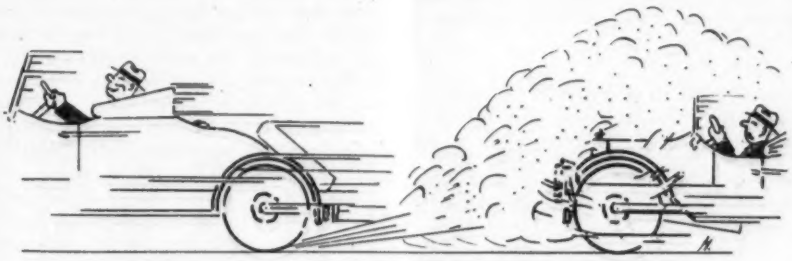
Plant Visitations

Designated times are indicated on the final program for visiting the Erie Works of the General Electric Company, the products of which concern are so well known in the industry, and the plant of the Hammermill Paper Company. On Friday afternoon and Saturday morning arrangements may be made to visit the following concerns, some of which have arranged special demonstrations for the attending members:

Plants	*Products manufactured*
Burke Electric Company	All types of motors and generators
Erie City Iron Works	Boilers, pulverizer equipment, etc.
Erie Forge and Steel Company	Steel ingots and forgings
Erie Malleable Iron Company	Kondu threadless conduit fittings, etc.
Hammermill Pulpwood Docks	
H. F. Watson Company	Roofings, insulating paper and board
Heisler Locomotive Company	Switching and logging geared locomotives
Jarecki Manufacturing Company	Pipe fittings, valves, compressors, etc.
Northern Equipment Company	Copes regulators, valves, governors, etc.
Skinner Engine Company	Steam engines of various types
Union Iron Works	High pressure boilers

White Water Surveys

The Engineering Department of the American Paper and Pulp Association has just published a valuable and instructive booklet entitled "White Water Surveys," the author of which is C. M. Baker, engineer of the association. The procedure of making a white water survey is described in a most comprehensive manner. The book is illustrated with charts describing "Weir Details and Velocity of Approach." An appendix contains "Proposed Standard Methods of Measuring," "Sampling and Analysing White and Waste Waters," "Manner of Reporting Results," and several tables of "Weir Flows" and "Flow Through Venturi Flume."



Those Who Follow Are Always Behind

Everyone who has been engaged in the manufacture of pulp and paper for the past decade can recall the time when the present scientific methods for heating and ventilating of mills were first introduced.

The Ross organization was the first to present a practical method for eliminating the waste and inefficiency in heating and ventilating.

Devoting all its time and resources to this important branch of engineering, the Ross organization has achieved marked success. ROSS SYSTEMS are operating to maximum advantage in more than three-fourths of the mills that constitute the paper industry in the United States and Canada. Their leadership in this field is unquestioned.

The success of Ross Systems has naturally brought forth, even at this late date, a number of new theories of heating and ventilating. Many of them have, in the past, been tried and found impractical by the Ross organization.

Maintaining its leadership in this field, the Ross organization will continue towards the development of newer and better methods that can add to the efficiency and economy now being secured.

J. O. ROSS ENGINEERING CORPORATION

201 North Wells Street CHICAGO

Main Office—122 E. 42nd Street NEW YORK

311 Lewis Building PORTLAND, ORE.

ROSS ENGINEERING OF CANADA, LIMITED

NEW BIRKS BLDG., MONTREAL

ROSS SYSTEMS

HEATING—VENTILATING—DRYING

New York Trade Jottings

R. S. Kellogg, secretary of the News Print Service Bureau, with headquarters at 342 Madison Avenue, New York, is spending a few days at Lime Rock, Conn.

* * *

O. F. Swanson, sales manager of J. Andersen & Co., and the Pulp and Paper Trading Company, of 21 East 40th street, New York, is visiting the western paper mills in the interests of his organization.

* * *

The Allied Mill Supply Corporation, which recently opened offices at 122 East 42nd street, New York, is an applicant for active membership in the National Association of Waste Material Dealers.

* * *

Regular weekly meetings and luncheons of the New York Division of the Salesmen's Association of the Paper Industry will be resumed on Monday, September 8, at the Fraternities Club, New York, following the usual summer recess.

* * *

Frederick M. Chase has resigned from the staff of Daniel M. Hicks, Inc., dealers in paper mill supplies, of 200 Fifth Avenue, New York, with which he had been connected for the past eight years. Mr. Chase was formerly president of Chase & Norton, Inc., of New York.

New York Paper Salesmen Hold Golf Outing

The New York Division of the Salesmen's Association of the Paper Industry held its regular monthly golf outing at the Leewood Golf Club in Westchester County on Tuesday, August 19. Owing to the fact that many of the members were away on vacation, the turn out was not as large as at previous outings but the members and guests present took advantage of the unusually fine weather to turn in some of the best scores which have been made at any of the outings this summer. Low gross was won by G. D. Wyatt of the Paper Industry, with a score of 78, par for the course being 71. Mr. Wyatt got an Eagle on the 12th hole, par for which is 5. Low net was won by Harold M. (Stubb) Early, of International Paper Company. We do not know just what the reason is, but apparently "Stubb" is what the sport writers call a "money player" as he usually seems to come through when prizes are in question.

Members of the New York Division are hoping that for the Association Tournament Outing in September, they will have as fine a day as they had last Tuesday and that a good turn out accompanied by good weather will finally pry the Harbison Cup loose from the clutches of the Chicago Division.

More Trouble for Colorado Paper Mill

DENVER, Col., August 23, 1930—General creditors of the Colorado Pulp & Paper Company are so much dissatisfied with the handling of the affairs of the company, while it was going through receivership, they have filed an appeal in the state supreme court asking that the receiver's sale of the property be set aside and exceptions are taken to the fees allowed the various persons connected with the receivership, a reduction requested.

George W. Beck the receiver was allowed $12,500 fee as general manager and $5,500 as receiver; Charles Ginsberg, John S. Stidger and Clifford J. Gobble attorneys were allowed $7,500, $3,000, $500 respectively.

Judge Samuel W. Johnson of the district court who handled the case is criticized for permitting the property to go to a receiver's sale.

This plant has been in turmoil ever since it was started, or a short time thereafter, yet many business men are of the opinion that it should have proved a money maker from the start.

Improvement in Indianapolis Demand

[FROM OUR REGULAR CORRESPONDENT]

INDIANAPOLIS, Ind., August 26, 1930.—At last the paper trade in this territory sees a little improvement in demand. The improvement has not been so marked in some grades as in others, but the fact that there is any improvement at all is encouraging. The jobbers of fine papers report a stimulated demand to dealers largely because of some increase in production by book publishers and the proximity of the school season. Prices quoted seem to be rather low even under present conditions, due, it is said, to a little throat slitting on the part of distributors mostly out of the city who apparently want sales badly.

Demand for building papers in this entire section has slumped alarmingly. The fall season, it would appear, will bring out nothing that will encourage the manufacturers in these lines. There is a good demand, however, for common grades to be used in the box and container factories. In most instances, these factories are working nearly at capacity and their executives report that prospects for the fall and winter are exceptionally good. They say the demand for their products is scattered over a wide area and orders are a little more active even if they still call for relatively small amounts.

Print paper demand is improving just a little in some of the rural districts, but weather conditions have been such in many sections that advertisers see little use in advertising because there is no buying power in their territory. Some demand is seen for wrapping paper, most of it being confined to the city trade here. The volume is hardly as high as last year, but there are indications of an improvement during fall.

There is one glorious prospect, however, for the correspondents of the PAPER TRADE JOURNAL. Unless everything stops, all the reports next year can be headed "Business during the past week shows an improvement over the same period last year."

Geo. W. Knowlton Celebrates 91st Birthday

WATERTOWN, N. Y., August 26, 1930—During the past week George W. Knowlton, head of the firm of Knowlton Brothers, celebrated his 91st birthday and he not only enjoys good health but actively assists in running the business. He was the recipient of many congratulatory messages from his friends. Mr. Knowlton has been connected with paper manufacturing since 1845 when he and his brother took over the business founded by his father on the same site.

The business was founded by the late George W. Knowlton, one of the pioneer paper mill men, who had associated with him the late Clark Rice in conducting a paper mill and book bindery early in the 19th century. In 1892 the son, George W. Knowlton, was made head of the concern and he has occupied that position since. Under his direction the firm has undergone steady expansion and the mill buildings have been enlarged from time to time to keep pace.

To Standardize Fourdrinier Wires

WASHINGTON, D. C., August 27, 1930.—The Simplified Practice Division of the Bureau of Standards has received a reqeust from the Wire Cloth Manufacturers' Association to co-operate in the establishment of a commercial standard for Fourdrinier wire cloth for paper making machines.

The proposed standard is intended to serve as a basis of common understanding as to criteria between the producers and users of this type of wire cloth. By this method it is hoped that misunderstandings between buyer and seller may be avoided, and the waste and expense incident thereto may be eliminated. According to present plans, the standard will cover nomenclature and definitions, grading rules, kinds of wire to be used, sizes of wires and openings, physical requirements for wire, and recommended standard practices in handling, installation and use of this commodity.

AMERICAN DELTHIRNA CORPORATION

DELTHIRNA
SIZING PROCESS

U. S. PAT. NO. 1,759,526

Means Cleanliness

155 mills all over the world have changed their old dirty, hot size-rooms into clean, cool rooms.

No more rosin sediments in the storage tanks.

No more size-piping obstructions.

No more rosin-specks in the paper.

Less incrustations on the machine felts and wires. Automatic purification of the rosin.

Cleanliness everywhere—in size-rooms—in beater-rooms—in machine-rooms.

That is the mark of

DELTHIRNA

For Full Particulars Apply to

MANSFIELD, BOLTON & KENT

Chemical Engineers and Sizing Experts

501 FIFTH AVENUE, NEW YORK

AMERICAN DELTHIRNA CORPORATION

CONSTRUCTION NEWS

A Summary of Vital Facts Regarding Construction, Finances and Operation of Paper Mills

Construction News

Gardiner, Me.—The Hollingsworth & Whitney Company, Gardiner, is said to have preliminary plans under way for a one-story addition to steam power plant at local mill, including improvements in present unit, reported to cost about $45,000, with equipment. Charles T. Main, Inc., 201 Devonshire Street, Boston, Mass., is engineer.

Big Stone Gap, Va.—The Mead Fibre Company, Dayton, Ohio, is said to be investigating water supply and other operating features of the mill of the United States Leather Company at Big Stone Gap, for which it is understood the Mead company has options to purchase. It is planned to establish a paper mill in this section at a later date, using the leather plant as the initial unit of the proposed development.

Muskegon, Mich.—The Michigan United Paper Company, recently organized by local interests with a capital of 1000 shares of stock, no par value, is said to be planning the early operation of a mill for the manufacture of waxed and other processed paper products. The new company is headed by Edgar A. Hall, Jr., and Arthur W. Penny, both of Muskegon.

Cleveland, Ohio—The Cleveland Corrugated Box Company, 5305 Sweeney avenue, S.E., has leased space in the building at 7275 Wentworth Avenue, S.W., totaling about 35,000 square feet of floor area, and will occupy for a new plant. Alterations and improvements will be made to cost over $40,000, and it is expected to have the quarters ready for use at an early date. The present works will be removed to the new location and additional equipment will be provided to double production.

Port Huron, Mich.—The Hercules Powder Company, du Pont Building, Wilmington, Del., has closed negotiations for the purchase of a tract of about 300 acres of land between Kraft and Holland Roads, near Port Huron, and is said to be planning to use a portion of the site at an early date for a new plant for the production of cellulose. The initial works will consist of a group of units reported to cost over $200,000, with equipment. The construction is contingent on use of the water canal in this section, which is expected to be arranged with the city in the near future. Engineering department of the Hercules company, address noted, will be in charge of the project.

Hagerstown, Md.—The Packseal Corporation, recently formed by Harold F. Brown, Frederick, Md., and associates, is reported to be planning operation of a plant in vicinity of Hagerstown for the manufacture of paper boxes and containers. William R. Seamns, Hagerstown, is interested in the new organization.

Cincinnati, Ohio—The Paper Service Company, Arlington Heights, is said to have preliminary plans under advisement for the rebuilding of portion of local plant, recently destroyed by fire with loss of about $50,000, including equipment and stock. Reconstruction is expected to cost close to a like sum. W. W. Rose is president.

Panama City, Fla.—The Southern Kraft Paper Company, Panama City, a subsidiary of the International Paper Company, 220 East 42nd. street, New York, has a working force of about 600 men employed in constructing its proposed new local mill in the Bay Harbor district. The basement of the digester building has been completed, and this unit will be pushed to completion; the foundation for the caustic unit is furnished and superstructure has been placed under way. Five spur tracks have been run to the site, in order to handle the material and machinery shipments to arrive at the property. The Rust Engineering Company, Koppers Building, Pittsburgh, Pa., is in charge of the machinery installation, and has constructed a frame office building at the plant site as local headquarters for the project. A power house is in course of construction and equipment will be installed at an early date. The entire plant is expected to cost over $2,000,000 and will be given over to the production of kraft papers.

Houston, Tex.—Texas Fibres Company, 820 Bayland avenue, is considering the installation of equipment in a local building, including carding machines, hackling machinery, presses, electric motors and other power apparatus.

Kalamazoo, Mich.—The Kalamazoo Molded Products Company, Edwards and Water streets, recently formed with a capital of $10,000, plans the operation of a local plant for the manufacture of molded paper goods, paper plugs, and kindred specialties. The new organization is headed by G. F. Lecmon and F. M. Chappell, Kalamazoo.

Indianapolis, Ind.—The American Paper Stock Company, 332-40 Market street, has taken out a permit to make repairs in its building, used for storage and distributing service.

Lee, Mass.—The paper mill of Eaton, Dikeman Company was recently damaged by fire, with loss reported as small, but official estimate not given. The damage will be replaced.

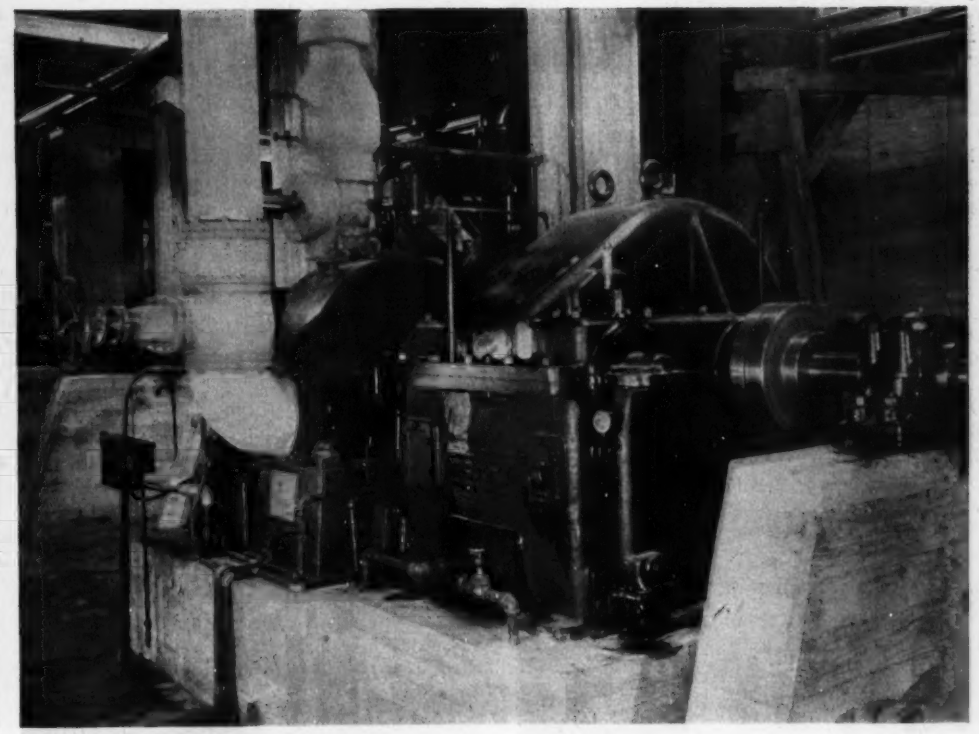
Hopewell, Va.—The Hummel-Ross Fibre Corporation, Hopewell, has arranged for a new bond issue of about $500,000, a portion of the issue to be used for general financing and expansion.

Cambridge, Mass.—The F. S. Webster Company, Cambridge, manufacturer of carbon papers and kindred specialties, has awarded a general contract to the Turner Construction Company, 178 Tremont street, Boston, for proposed new addition to its mill, to be five-story, 80 x 210 feet, to cost over $100,000, with equipment. Work is scheduled to begin at once and to be completed early in February. A portion of the unit will be given over to office service. Densmore, LeClear & Robbins, Park Square Building, Boston, are architects.

Des Moines, Iowa—Fire recently damaged a portion of the storage and distributing department of the Sherman Paper Company, South West Ninth and Tuttle streets. An official estimate of loss has not been announced. The damage will be replaced.

Erie, Pa.—A paper manufacturing company known as the Daka Paper Company, is said to have negotiations under way for the purchase of the former plant of the Modern Tool Works, Inc., on lower State street, and proposes to remodel and equip

TERRY



10 to 1 SPEED RANGE WITHOUT STEPS

The Terry Turbine Paper Machine Drive can be furnished to operate over any speed range up to 10:1.

High speeds and low speeds are available without any change in the driving equipment other than a small governor adjustment. All speeds from minimum to maximum can be secured without steps. Unusually accurate regulation is obtained at all settings.

Control of speed may be mechanical or electrical, and remote if desired.

Ask for Bulletin S-89.

The TERRY STEAM TURBINE COMPANY
TERRY SQUARE, HARTFORD, CONN.
Steam Turbines - Gears - Shaft Couplings

T-1069

the structure for a new local mill. It is said that the project will mature at an early date.

Wisconsin Rapids, Wis.—The Ahdawagam Paper Products Company, Wisconsin Rapids, has begun the erection of a new plant unit, to be one-story, 110 x 200 feet, reported to cost over $90,000, with equipment. It is expected to have the unit ready for service in the fall.

Vancouver, B. C.—The Powell River Company, Ltd., 311 East Fourteenth street, Minneapolis, Minn., has work under way on a new mill at Vancouver for the manufacture of paper specialties, estimated to cost about $150,000, with equipment, and expects to have the plant ready for initial production at an early date. The company is also carrying out an expansion program at its mill properties, including the installation of additional power and operating facilities.

New Companies, Etc.

Lynn, Mass.—The Superior Fibre Counter Company has been incorporated with a capital of $50,000, to manufacture fibre goods. Harry Melved, 5 Murray street, Chelsea, Mass., is treasurer.

Waterbury, Conn.—The Standard Paper Company has filed notice of increase in capital stock to 750 shares of $100 par value, and 1000 shares preferred stock of $25.00 par value, for general expansion.

Worcester, Mass.—The Rosh Waste Paper Company has been organized with a capital of 59 shares of stock, no par value, to deal in paper stocks. Jacob Rosh, 10 Jones street, Worcester, is treasurer.

Division of Cellulose Chemistry To Meet

The Division of Cellulose Chemistry of the American Chemical Society will carry out the following program at its meeting to be held at Cincinnati, Ohio, September 8-12:—

WEDNESDAY MORNING

1. 9:00—Max Phillips. The Distillation of Alkali Lignin with Zinc Dust in an Atmosphere of Hydrogen.
2. 9:15—Max Phillips, J. Davidson, and H. D. Weihe. Studies of Lignin in Wheat Straw with Reference to Lodging.
3. 9:30—L. E. Wise and A. Fairbrother. The Determination of Lignin in Wood.
4. 9:45—S. I. Aronovsky and R. A. Gortner. The Cooking Process. II—Cooking Wood with Sodium Carbonate.
5. 10:10—C. E. Curran, F. A. Simmonds, and H. M. Chang. The Effect of Beating on the Chemical and Physical Properties of Pulps.
6. 10:35—E. C. Sherrard and E. F. Kurth. The Movement of Extractives in Redwood upon Drying.
7. 11:05—L. F. Hawley and J. Wiertelak. The Effect of Decay Caused by White Rot Fungi on the Chemical Composition of Wood.

11:50—Adjourn.

WEDNESDAY AFTERNOON

8. 2:00—W. M. Billing and J. S. Tinsley. The Determination of the Nitrogen and Acetyl Content of Cellulose Nitro-Acetate.
9. 2:15—H. Hibbert and Co-workers. Synthesis of Polysaccharides by Baterial and Enzyme Action and the Nature of Plant Synthesis.
10. 3:05—G. J. Ritter and R. Seborg. A New Microscopic Structural Unit of Wood Fibers.
11. 3:30—Max Phillips and H. D. Weihe. Studies of Lignin Sulfonic Acids. I—The Degradation of Lignin Sulfonic Acids with Barium Hydroxide Solution. (By title.)
12. 3:45—Max Phillips and M. J. Goss. Is Formaldehyde a Hydrolytic Degradation Product of Lignin? (By title.)

Obituary

Charles L. Hamilton

PHILADELPHIA, Pa., August 25, 1930—Charles Lacey Hamilton, formerly engaged in the paper manufacturing business as member of the firm of W. C. Hamilton & Sons, Miquon, near Philadelphia, died at his apartment in Atlantic City last week following a heart attack. Mr. Hamilton, who was 82 years of age, was summering in the seashore resort, where he occupied an apartment at the Hotel Chelsea. He lived at the Warwick Hotel, in this city, in the winter months, and was spending the summer at his shore apartment when stricken. Mr. Hamilton had been in failing health for the past four years and had retired from active business. He was the son of W. C. Hamilton, founder of W. C. Hamilton & Sons, fine paper manufacturers, occupying the mill in Miquon, which was particularly noted for its spring water of unusual clearness and which was adapted for the manufacture of high grade writing papers. In recent years the mills have changed hands several times and at present are conducted by a company, of which Howard Taylor is president, and which purchased the business from the Hamilton estate. He is survived by his widow and four children, Mrs. Walter M. Schwartz, Chestnut Hill; Mrs. Royland P. Falkner, East Orange, N. J.; Mrs. James F. Benson, Chestnut Hill, and Charles L. Hamilton, Jr., of this city. Funeral services were conducted from 1820 Chestnut Street, this city, last Tuesday.

O. H. L. Wernicke

PENSACOLA, Fla., August 20, 1930.—O. H. L. Wernicke, chemist and inventor of a sectional book case, died here today at the age of 69. He was an organizer of the Pine Institute of America and was one of the first men to manufacture wood pulp in the South. His pulp experiments were carried out at Gull Point, near Pensacola.

Awards for Government Paper

WASHINGTON, D. C., August 27, 1930.—The Government Printing Office has announced the following paper awards:

Walker, Goulard, Plehn Company, will furnish 15,625 pounds (44,140 sheets) of 26 x 42, No. 1 rope manila drumhead paper at 16.75 cents per pound, bids for which were received on August 11.

Reese & Reese will furnish 11,200 pounds (35,000 sheets) of 24 x 36, 320, high finish red sulphite paper at 7.3 cents per pound and the Holyoke Card and Paper Company will furnish 10,000 sheets of 22 x 28, 4 ply red railroad board at $3.25 per 100. Bids for these items were received on August 6.

The Barton, Duer & Koch Paper Company will furnish 36,000 pounds of 20 x 30, best quality hard rolled, binders board at 5.5 cents per pound, bids for which were received on July 30.

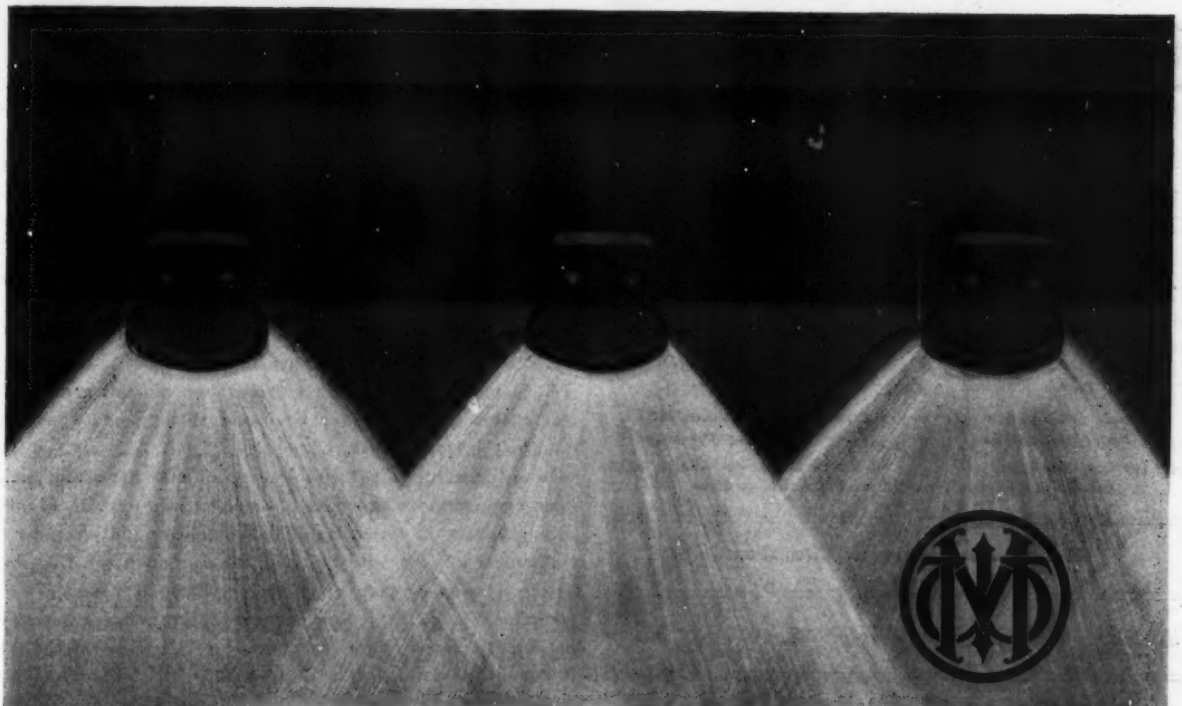
The Virginia Paper Company will furnish 2,520 sheets of 22 x 28, gray cardboard at $46.06 per M sheets, bids for which were received on July 25.

The Nashua Gummed and Coated Paper Company will furnish 4,050 sheets of blue cloth lined paper at $18.00 per M, bids for which were received on July 23.

The R. P. Andrews Paper Company will furnish 80,000 pounds (32,000 sheets) of No. 2 quality hard rolled binders board at 3.5 cents per pound, bids for which were received on July 21.

H. J. Trolan Leaves Superfine Paper Mill

CLAYVILLE, N. Y., August 26, 1930—Announcement is made that H. J. Trolan has severed his connections as assistant general manager of the local plant of the Superfine Paper Mill and has returned to New York City where he will continue in the business. During the past week he was guest of honor at an outing held by the employes at Sylvan Beach during which he was commended for his work with the concern.



They wash clean

M & W "Criss Cross" Shower Pipes wash Fourdrinier wires and felts completely clean, leaving no fibres adhering to streak the paper or ridge the wires. They clean rotary screen plates effectively, so that no working area is lost. And they do their work on a much smaller allowance of water than is usually thought necessary.

The reason lies in the patented "Criss Cross" construction. The centers of the fan-shaped jets strike the clinging fibres squarely. In between, the fibres are struck by two jets from opposite angles. Either way, the fibres are knocked off with maximum certainty and minimum cost for water.

We are glad to place a "Criss Cross" Shower Pipe in any mill on 30-day trial. When writing, state width of wire or felt. If the Shower Pipe is to be used in a rotary screen, state make of screen and length of plates.

THE MOORE & WHITE COMPANY
Established 1885
15th ST. & LEHIGH AVE. PHILADELPHIA, PA.

You will be interested in the new Shower Pipe Bulletin, just published.

"CRISS CROSS" *shower pipes*

PAPER TRADE JOURNAL
ESTABLISHED 1872

10 East 39th St., New York

Henry J. Berger
Editor

Ronald G. Macdonald
Editor Technical Section

Herbert J. Laughton
Associate Editor

Thomas J. Burke, C. A.
Editor Cost Section

Reginald Trautschold, M. E.,
Power Engineering Consultant

Price, Per Copy, 10 Cents United States, Per Annum, $4.00
Canada and Foreign Countries in Postal Union, $6.00

Member Audit Bureau of Circulations

Vol. XCI New York, August 28, 1930 No. 9

STUDYING COATING MILL PROBLEMS

A concentrated effort is being made this year by the Technical Association of the Pulp and Paper Industry to assist the mills of the coated paper industry to solve some of its many problems. This is particularly gratifying since this branch of the pulp and paper industries is almost the last group to become conscious of the technology involved in its manufacturing procedure.

Early in the present year the members of TAPPI who have personal interest in the coated paper field met and considered the industry's manufacturing problems. This led to the formation of a Coated Paper Committee. In the recent committee reorganization of the Association, however, the committee was designated as the Finishing, Processing and Converting Committee and it will in the course of time consider all of the important problems that will be within its scope. For the present the committee as a part of the TAPPI Operating Division will restrict its attention to coating problems.

At its first meeting the needs of such a committee were outlined under three headings, namely, to the Technical Association, to the coated paper industry and the individual workers in the coating field. This led to an agreement by those in attendance to adopt the following objectives:

1. To work together for the common good toward a solution of vexing problems in the coating field.
2. To attempt by research to uncover facts now dormant which are pertinent to the industry.
3. To realize these efforts by placing the emphasis on co-operative endeavors.
4. When requested, to provide papers or programs for association conventions.
5. To disseminate to the industry such conclusions as may be drawn from the committee work.
6. To lay the foundation for the scientific development of the industry.
7. To aid in bringing about a spirit of cooperation between the coating mills.
8. By careful and useful work to establish the committee's position as an authority on matters pertaining to scientific and technical procedure in the paper coating processes.

To make the work effective the committee has been divided into a number of sub-committees, each of which is responsible for the working out of a single problem. The problems that are being considered at present are as follows:

1. Standard specifications for raw stock for various types of coating.
2. Standardization of methods for testing of raw material.
3. Roll versus brush coating machines.
4. Standard methods for the preparation of coating materials.
5. Standard methods for buying, evaluating and storing of pulp or lake colors.

In an effort to be as helpful as possible to the coating mills their cooperation was enlisted. A letter was sent to 51 mills stating briefly the formation of the committee and seeking their willingness to work with the various sub-committees. To these letters 32 replies were received of which 28 were distinctly favorable, 3 "on the fence" and one unfavorable. The replies indicated an appreciation on the part of the mills of the need in the industry of such a committee.

Much of the work of the sub-committees at the present time consists in assembling a considerable amount of data on special subjects furnished by the cooperating mills. This in itself is a fair sized task and its analysis will take some time longer. However, it is expected that conclusions of real consequence will be presented at the annual meeting of TAPPI at which every coated paper company should be represented by competent technical men including the mill managers, superintendents, engineers and chemists.

In the organization of the committee an effort was made to have the personnel as representative of the coating field as possible. The list is not considered to be complete and from time to time other qualified members of the Technical Association will be invited to serve. The present personnel include the following: Norman Clark, Chairman, Standard Paper Manufacturing Company, Richmond, Virginia; G. R. Alden of Dennison Manufacturing Company, Framingham, Mass.; W. E. B. Baker of Stein-Hall Company, New York; Arthur Bowden of Henry Bosch Company, Chicago, Ill.; O. W. Callighan of Edgar Brothers Company, New York; A. C. Dreshfield of the Paper Makers Chemical Company, Kalamazoo, Mich.; F. W. Eagan of J. O. Ross Engineering Company, New York; W. K. Kidder of the Allied Paper Mills, Kalamazoo, Mich.; K. T. King of E. I. duPont de Nemours, Chicago, Ill.; J. J. O'Connor of the Mead Corporation, Chillicothe, Ohio; H. M. Rafton of the Raffold Company of America, Boston, Mass.; A. L. Sherwood of the National Folding Box Company, New Haven, Conn.; M. R. Sentman of J. H. Day Company, Cincinnati, Ohio; F. W. Schneider of the Hampden Paint and Chemical Company, Springfield, Mass.; and B. K. Steadman of the Standard Paper Manufacturing Company, Richmond, Va.

It will be readily noted that the members of the committee are outstanding experts in their respective fields. The more progressive coating mills are well represented and the members not employed by these mills have a broad knowledge of

the industry's problems insofar as their specialties are concerned such as dyes, casein, starch, coating machines, mixers, clays, etc. Such a committee backed up by the individual mills will obviously be able to contribute much to the industry in future years and possibly even during the current Association year which ends in February. It will need continuous optimistic support by all the companies of the industry. Although there are almost always a few companies that never support such activities, some, due to a feeling of possessing technical superiority regarding the other companies of the industry and others that are so-called "weak sisters" who absorb such information as they get but give nothing in exchange, it is to be hoped, at least, that the coated paper industry will be cooperative in helping the Technical Association prepare reports of real value to the entire industry. TAPPI is so constituted and operated that all of the information it gathers is available to everyone interested. Such an organization should have the whole-hearted support of every individual and company making pulp or paper in any form.

Miami River Not Polluted by Paper Mills

DAYTON, Ohio, August 26. 1930.—Wholesale destruction of fish in the Great Miami river near the Miami Chautauqua grounds, Franklin, and at Middletown, the Paper City, led to an investigation whether refuse liquors from paper mills was the cause.

Fortunately, for paper mill owners the investigation, made by the State Health Department and Izaak Walton League officials, proved a complete "alibi" for the mill owners and showed conclusively that organic pollution, flushed into the river by the heavy rains on the night of August 5, following the extended dry period and an extremely low river stage bringing about depletion of dissolved oxygen, caused the destruction of the fish.

The theory that refuse from paper mills may have resulted in the wholesale slaughter of the finny tribe, did not hold, from tests made by city and state chemists.

Bruce M. Dill, assistant engineer of the State Department of Health, spent several days here making an investigation and other state officials came to the Miami Valley. Their exhaustive probe resulted in a complete exoneration of the paper mill owners, which has proved a matter of real satisfaction to them as there has been much discussion at times in the past whether the mills really were responsible for river pollution.

Most paper manufacturers have taken the stand that no definite proof has been produced in the past that refuse liquors were responsible for the destruction of fish and river life, yet careful steps have been taken to prevent pollution and special devices were installed to prevent pollution, just the same. This was done to satisfy local and state authorities in various sections of the Miami Valley, both north and south of Dayton.

Izaak Walton League officials are keeping a close watch on the rivers of this section for the protection of water life and to prevent a recurrence. Communication with the State Board of Health will be continued, and at the same time suspicion will not be directed against paper mill or allied concerns.

To Reduce Tax Rate in Holyoke

HOLYOKE, Mass., August 19, 1930—Of vital interest to the local paper manufacturers is the announcement by Chairman Joseph J. Kelly of the Board of Assessors of a reduction in the tax rate of 40 cents—$22.20 per $1,000 this year instead of $22.60 last year. This is the third year of reductions, Mayor Fred G. Burnham reducing the tax rate each of the two years he was in office. As business at the paper mills has been affected by the industrial depression the reduction while not large is especially appreciated this year.

International Paper Has Good Water Supply

Despite the widespread drought throughout many sections, the hydro-electric developments of the International Paper and Power Company and its subsidiary, the International Hydro-Electric System, have very satisfactory water supplies in sight.

In Canada, on the Gatineau River, where are located the three largest plants of the Company with a total installed capacity of 436,000 horsepower, water conditions are unusually good. The present flow of the river is more than sufficient to run the Company's plant at full capacity without use of any stored water. The Mercier storage reservoir, above the three plants, with a capacity of 100,000,000,000 cubic feet is practically full, and with the additional storage now provided by the new Cabonga reservoir, insures an adequate supply of water to carry not only the Company's present load but also to meet the large increases in contract deliveries of primary power scheduled for this fall.

In New England, the nine hydro-electric plants of the New England Power Association on the Deerfield and Connecticut Rivers generated 428,000,000 kilowatt hours during the first seven months of this year, compared with 406,000,000 kilowatt hours in the first seven months of 1929, showing a new record for that period. This result, with less precipitation, indicates that the flow has been more evenly handled this year and that less water has been lost. The storage on the two rivers is substantially the same as it was last year this time, and the present flow is practically normal.

On the Hudson River, the storage provided by the recently completed Sacandaga Reservoir is maintaining the flow of the river at a point which permits the plants to operate at their usual capacity.

Northeastern Superintendents To Meet

The Fall and Annual Meeting of the Northeastern Division of the American Pulp and Paper Mill Superintendents Association will be held at the Balsams, Dixville Notch, New Hampshire, September 19-20, 1930.

Chairman Cape has appointed E. J. McDonnell of Groveton, N. H., as chairman of arrangements, and he has chosen the following: W. D. Sommerville, W. T. Libby, John A. Harlow, H. J. Desmond, C. W. Stewart, C. A. Brautlecht and K. E. Terry to assist him.

The program as outlined is to be golf, Friday, the 19th, at 2 P. M.; business meeting and election of officers at 2 P. M., Saturday, the 20th and banquet and entertainment in the evening.

It is expected that Dr. Adams of the M. I. T., will give a paper on "Control System in Paper Manufacturing: and K. A. Newman of E. F. Houghton & Company, one on "Lubrication in Paper and Pulp Mills."

The rates at the Balsams are $7.00 per day per person, two in a room, without bath; $9.00 with bath (American plan). This includes banquet and golf.

The Balsams is one of the most beautiful spots in the White Mountains.

To Ship Pulp Via Panama Canal

[FROM OUR REGULAR CORRESPONDENT]

OSWEGO, N. Y., August 26, 1930.—A large consignment of baled pulp will arrive at the plant of the Taggart Paper and Bag Corporation, within the next few weeks from Tacoma, Wash., and plans call for its transportation through the Panama Canal and up the coast to Baltimore. From that point the several thousand tons will be consigned to barges and brought up the Atlantic Coast over the barge canal to the local terminal.

For some time past about fifty per cent of the baled pulp used at the local plant has been coming from Tacoma, but up to now it has been shipped across the country in freight cars. Following investigation, however, it was found that the water route was the most economical, although requiring more time for the pulp to reach its destination.

AMPLE FACILITIES ASSURE EXCELLENT SERVICE IN KALBFLEISCH ROSIN SIZE

KALBFLEISCH is exceptionally well organized to give superior service in Rosin Size. We operate four scientifically equipped Rosin Size plants, located with especial reference to the needs of the paper industry.

Shipments of Rosin Size are made direct from these plants in Erie, Pa., Waterbury, Conn., Kalamazoo, Mich., and DeQuincy, La., in tank cars and in drums. The Franklin Tank Line, owned and operated by Kalbfleisch, assures promptness in making shipments.

SYMBOL of QUALITY KALBFLEISCH CHEMICALS FOR OVER A CENTURY

The well planned grouping of plants, and modern shipping facilities under the direction of a trained organization, give vitality and significance to Kalbfleisch service.

KALBFLEISCH SERVICE for PAPER

200 FIFTH AVE., NEW YORK, N. Y.

CHATTANOOGA, TENN.
KALAMAZOO, MICH.
WATERBURY, CONN.
DE QUINCY, LA.
ELIZABETH, N. J.

The KALBFLEISCH *Corporation*

ERIE, PA.
JOLIET, ILL.
KOKOMO, IND.
CINCINNATI, OHIO
CAMP VERDE, ARIZ.

Section of the
Technical Association of the Pulp and Paper Industry
Edited by Ronald G. Macdonald, Secretary

Modified Schopper-Riegler Freeness Tester

By Robert M. Boehm[1]

In the manufacture of insulating boards or other products requiring a long, coarse fiber, the ordinary freeness tester is of little value as a control method for determining the characteristics of the stock. Other methods have been devised to give a numerical value for fibers of this type, but without exception, these methods are of value from a research angle only, since they are long and complicated and are not applicable to control work, where results must be secured in a comparatively short time. These other methods may be briefly mentioned.

First, the purely visual examination, which consists of mounting the fibers in water or other media and casting the image on a screen by the balopticon or other optical instrument. The image is then compared to standards of known composition. While this is of considerable value from a control standpoint, it has several objections. First, no attention is paid to other properties of a fiber than number and size. Hydration of the fibers, fibrillation and other characteristics which may cause an intrafibular bond are neglected. Second, fine fibers, fillers and the like can be recognized only roughly and must be grouped as "many fines," "few fines," and the like. Third, a skilled operator is necessary for these tests, or at least one who has had considerable experience in judging quantities and sizes of fibers. Even with such an operator, the personal error is great, and it is difficult to secure different operators who will consistently secure comparable results. Fourth, no numerical value can be obtained which is readily translatable into mill operation.

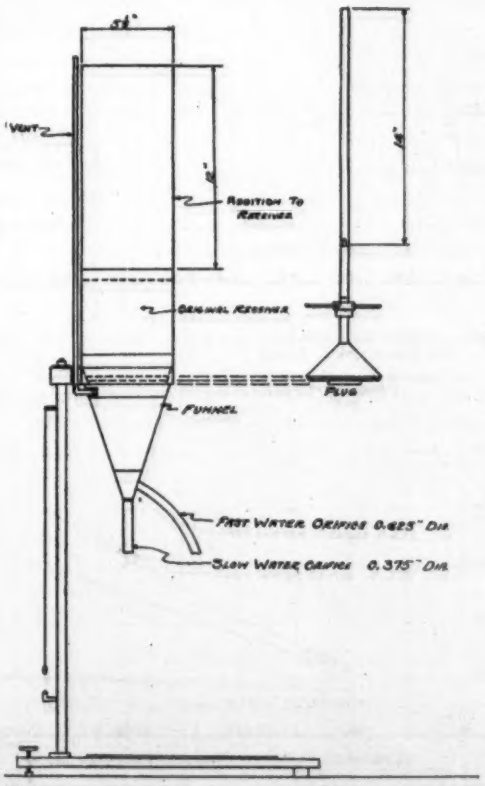
A second method of evaluating fibers of this type is by means of the "fiber count." This consists of first making a separation on a separatory screen which removes all fines. By "fines" is meant all fibers, which are less than .05-inch in length, or in other words, those which, when enlarged ten diameters on the balopticon, will be too small or too numerous to measure and count with any degree of accuracy. These are recorded by weight only. The balance of the coarser fibers are thrown on a screen, enlarged ten diameters and each fiber is measured and counted. They are then reported in percentage by length. This method is open to much the same objections as the previous one, with the addition that it is a long and tedious operation and is of little or no value as a control test. Both of these methods, and particularly the latter, are valuable as research tests, but it is practically impossible to secure numerical values of any accuracy in the space of time necessary for routine control tests.

A third method consists of dividing the fibers into fractions by length by mechanical means, such as separatory screens of different openings, or flotation. The various fractions are reported by weight only. This gives a numerical value and is considerably quicker than the fiber count, but it still requires too much time to be very valuable as a control test and it is open to the practical objection that the fibers tend to mat and prevent accurate separations.

All of these methods make no pretense of determining the characteristics of the fiber other than size and none of them give sufficient value to the fines or fillers which may be present as cementing material, nor to the degree of hydration or fibrillation.

Deficiencies of the Freeness Test

The freeness test is also open to a number of well-merited objections, principally, that the fiber combination is measured, rather the distribution of fiber length. That is, a combination of very long fibers and very short fibers may give the same freeness reading as a mass of medium fibers. It is evident that freeness is far from an absolute value, but under ordinary operating conditions, a freeness figure will indicate the trend of the stock and will point out any discrepancies in the process.



MODIFIED SCHOPPER-RIEGLER FREENESS TESTER

[1] Member TAPPI; Director of Research, Masonite Corp., Laurel, Miss.

These discrepancies may then be checked, if necessary, by one of the previous methods. The freeness tester does give a measure of the fines or fillers present and of the condition of the fiber. It can be performed rather quickly by an unskilled operator and its results can be closely checked. As more practical evidence of its value, it was found that the quality of the product varies rather consistently with the freeness. The relation is not absolute, of course, but by consistently watching the freeness readings on the machine and on the various refiners, the operator has a close check on his conditions.

The fiber used in the manufacture of insulating board and allied products is long, coarse and relatively unhydrated as compared to paper stock. As such, the mixture formed with water is not nearly so intimate, and the fibers tend to mat together and to settle out of the suspension. Further, the freeness testers on the market are designed for the evaluation of paper stock and are not applicable to fiber of the coarser type.

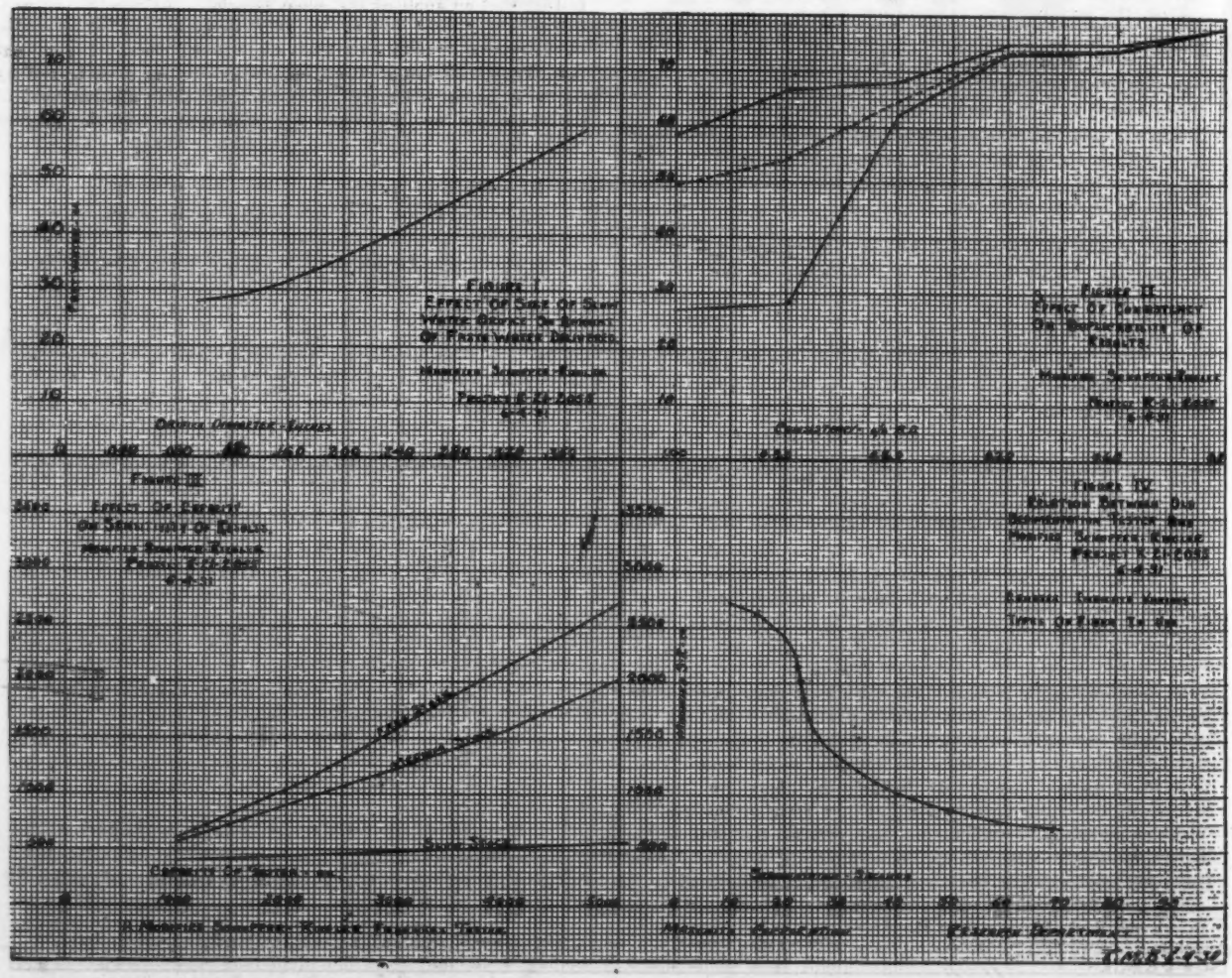
First attempts were made to evaluate the fibers by the old type of sedimentation tester, with a few added modifications. In this instrument, the slurry is added to a vertical glass tube of relatively small cross section. In the bottom of this tube is a wire screen, closed by a stopper. The time is taken for the level of the slurry to drop a given distance when the stopper is removed. As the mat formed on the screen increases in thickness, the passage of water is restricted to an extent depending on the thickness and the closeness of the mat.

The above method was never entirely satisfactory, due to the tendency of the fiber to mat and come down in chunks, thus upsetting the readings. It was also found that the test was not sufficiently sensitive to differentiate between fibers of slightly different characteristics in the critical zone at which the machine was operated.

Accordingly, it was decided to select a freesness tester of the usual type and introduce such modifications as seemed necessary. After some experimental work with various instruments, the standard Schopper-Riegler Freeness Tester, sold by the Foreign Paper Mills Company was selected for further work. This instrument was adopted because it lent itself very well to the modifications which we had in mind.

The Schopper-Riegler freeness tester consists of a steel funnel, carrying two outlets, one to carry off the "slow water" in a constant stream and the other, which is higher on the funnel, to take the excess or "fast water." The amount of fast water secured is a measure of the freeness. Above the funnel is a wire screen on which the fiber mat is formed. A cylindrical receiver surmounts the screen, into which the stock mixture is poured. The screen is closed off from the receiver by a large plug which also functions as a mixing device when it is lifted, giving the stock a last thorough mixing before the water is drained off. The entire tester is well constructed of heavy steel and lends itself easily to changes or modifications such as were found necessary.

The first difficulty experienced was due to the extreme freeness of the stock. The bulk of the water left through the fast water orifice and practically no distinction was made between stocks of different freeness. This was corrected to some degree by enlarging the slow water orifice from .095 to .375-inch.



The results obtained are shown in the curve, Fig. I. These tests were run at 1.0 per cent consistency.

While this produced a material improvement in the sensitivity of the instrument for this type of stock, it was found that the fiber mat was not sufficiently thick nor sufficiently close to increase the accuracy of the instrument in the critical range. An increase of consistency above one per cent could not be resorted to, since even at this consistency, there was a noticeable separation of the fiber. Accordingly, a study was made of the optimum consistency at which duplicable results could be secured, without regard to the sensitivity of the test. The results of this investigation are shown in Fig. II, showing the great increase in accuracy obtained by a reduction in consistency from 1.0 to 0.5 per cent. Accordingly, 0.5 per cent bone dry consistency was accepted as standard.

It was now necessary to increase the thickness of the fiber mat without using a consistency in excess of 0.5 per cent. This, obviously, could be done only by increasing the quantity of the mixture used. The Schopper-Riegler tester is designed to hold 1,000 cc. of stock and water. Accordingly, an addition was made to the receiver to increase the capacity to 5,000 cc. The results obtained are plotted in Fig. III and illustrate the increased sensitivity obtained by the increase in thickness of the fiber mat.

A series of tests were now made to show the relation between the modified Schopper-Riegler tester and the older style of sedimentation tester then in use. According to the theory along which this work had been carried out, the modifications applied should spread out the critical range in which our particular stock falls, and show a larger spread between stocks of slightly different freeness. Fig. IV shows how well this theory was confirmed. The bulk of the stock used in the process gave values between 22 and 24 seconds. With the modified Schopper-Riegler tester, this range is expanded to 1,700 to 2,250 cc, thus allowing a very clear distinction between the different stocks in this range. Stocks of different characteristics are noted by crosses on the curve. It is shown that, of the seven types of stock used, four are very close together on the sedimentation tester, but are well spread on the modified instrument. The other three stocks are well out of the critical range and no difficulty is experienced in obtaining relatively great sensitivity by either method, although the modified Schopper-Riegler has been proven to be much more accurate as regards duplicability of results.

Summary

The following methods for evaluation of coarse fibers are briefly described: visual examination; fiber count; fractional separation.

It is shown that these methods are not applicable to control work because of: length of time required; absence of numerical value; or absence of data other than dimensions of fibers.

A type of sedimentation tester is described and criticized.

The Schopper-Riegler Freeness Tester is described, together with the modifications made and the results secured. Curves are given showing the increase in accuracy and sensitivity for the critical range of the particular type of stock under test.

Russian Paper Men Visit Bagley & Sewall Plant

[FROM OUR REGULAR CORRESPONDENT]

WATERTOWN, N. Y., August 26, 1930.—A group of engineers from the Volga River Paper Company, Russia, are in this city, studying the manufacturing methods used by the Bagley & Sewall Company, and it was learned that they plan to visit other paper mills in Northern New York, before returning home. While in this city, they are also studying the building of the machine which is now under construction for the Russian mill. The Bagley & Sewall Company, recently installed a new machine in the Volga Mill and this is now in operation.

When the present contract is completed in this city, the engineers plan to return to Russia, where they will assist in the installation.

Suppression of Inventions

The patents committee of the management division of the Technical Association of the Pulp and Paper Industry contributes the following information indicative of one way in which an invention may be protected. Other statements will be issued from time to time.

There are only three possible ways of preventing others from availing themselves of a new and valuable discovery. Probably the simplest, though not always the least expensive, is to suppress the invention entirely. This method has the obvious drawback that so long as the discovery is kept secret, the inventor is also deprived of all possible benefit. Furthermore, there is always the danger that other workers in the art will rediscover or stumble across the invention, in which case the first inventor may forever lose his rights. For the courts have often held that a second bona fide inventor is entitled to prevail against one who attempts to keep his discovery secret. Hence, this expedient is rarely resorted to, except by inventors in adverse circumstances and by those who feel that their discovery is so far ahead of the art that the seventeen year monopoly of a patent would be insufficient to secure to them a commensurate reward.

Illig's invention of rosin sizing may be cited as a classic example of a discovery that came before its time. As related in S. R. Olsen's article (Technical Association Papers 1929, Page 112) Illig made his revolutionary contribution to the paper industry in 1807 and although he published a brochure on the subject, his process did not come into actual use until 1820. And even then practical papermakers did not realize its full significance and insisted on applying erroneous principles for nearly a century, in spite of Illig's clear and concise description.

Many Precocious inventors who find themselves in Illig's situation, file an application for a patent as soon as possible and by taking advantage of every technicality and delay allowed by law, try to keep it pending until a real need for the invention is demonstrated. Formerly it was possible to keep an application alive in the Patent Office for as long as thirty-six years and a few inventors have thus found it possible to dominate their arts for years after they had been independently developed by the work of others.

Changes in the Patent laws have cut down considerably the time that an application can be kept pending. However, it is still possible to keep a case alive for as long as five years, due to the fact that the personnel of the Patent Office is totally inadequate in numbers to give prompt attention to the hundred thousand applications that are filed annually. Recent increases in salaries and in the number of examiners should go a long way in further cutting down the tim, that an application can be kept pending.

New TAPPI Members

N. O. Galteland, engineer, Puget Sound Pulp and Timber Company, Everett, Wash.

L. J. Garrigan, manager, Locke Regulator Company, Inc., Salem, Mass.

W. H. Harding, assistant service manager, Kalbfleisch Corporation, New York.

H. W. Johnson, chemist, Forest Products Laboratories of Canada, Montreal, P. Q.

L. F. O'Connell, mill chemist, Great Lakes Paper Company, Fort William, Ont.

L. A. Pflieger, chemist, Marathon Paper Mills Company, Rothschild, Wis.

A. G. Pounsford, general manager, Provincial Paper Ltd., Port Arthur, Ont.

S. D. Reynolds, maintenance engineer, Container Corp. of America, Manayunk, Pa.

Nils Rosenlew, engineer, Taggart Oswego Paper and Bag Corporation, Oswego, N. Y.

Fireproofing Paper And Boards

By Joseph Rossman[1]

No organic material can be made fireproof in the strictest sense of that term, since all organic materials will decompose and char when heated sufficiently high; but they can be made flameproof or flame resistant so that they will neither ignite on contact with a flame nor themselves emit flame when heated for a moderate length of time. This is the commercial sense of the word fireproof.

Many methods have been proposed for fireproofing fibers, animal and vegetable. One method depends on the deposition of insoluble mineral materials in the pores with successive solutions of soluble silicates and mineral salts. Fibers so treated have the defect of harshness, brittleness and inelasticity, the mineral matters preventing the free gliding of the fibers over one another which is necessary to preserve the original character of the fiber as regards elasticity and strength. Other methods depend on the saturation with such soluble salts as give off flame-diluting and flame-stifling vapors, like alum and the ammonia salts.

Patent 1,116,349 dated Nov. 3, 1914 to Zeller, for instances, makes a fireproofing solution from one gallon of hot water, 19 ounces of ammonium sulphate, 4 ounces of ammonium phosphate, 1 ounce sodium phosphate and 1 ounce borax.

The purpose of these chemicals is as follows: Ammonium sulphate and ammonium phosphate are both good fireproofing materials. The phosphate is the better of the two because it generates in the presence of heat more ammoniacal gases than the sulphate and it tends to prevent ignition and it reduces inflammability. Since the cost of the phosphate is several times that of the sulphate, it is preferable to use them mixed together in about the proportions stated, because in this way the cost of the product is reduced and as an added advantage, a bulk of fire resisting material sufficient to thoroughly impregnate the material being treated is secured.

Fireproofing Fiber Boards

It is well known that if zinc chloride is added to ammonium hydroxide, an insoluble precipitate of zinc hydroxide is obtained, which is insoluble in water, but is soluble in an excess of ammonium hydroxide, forming a complex compound of ammonia with zinc oxide, probably having the formula $3ZnO.4NH_3.12H_2O$. This complex compound is further mixed with ammonium chloride. This solution is found to be a useful fireproofing agent, for articles which are dipped therein, have precipitated on their fibers both the zinc hydroxide and ammonium chloride of the solution. When subjected to fire, these fireproofed articles have their zinc hydroxide constituents changed to zinc oxide, while the ammonium chloride volatilizes, and being a nonsupporter of combustion, serves to aid in checking the fire.

In applying this solution to the fiber board, known as "Insulite," however, it is found that it cannot be satisfactorily used, because the excess of ammonium hydroxide present burns the board, because of its pronounced causticity. Accordingly, in carrying out the invention of Patent 1,338,322 to Munroe, April 27, 1920, a fireproofing solution is prepared in the manner above described, and then the excess of ammonium hydroxide is neutralized with hydrochloric acid, with hydrofluo silicic acid, thus leaving the zinc hydroxide in the solution.

The fireproofing solution thus prepared may now be diluted with water to the desired strength, for the purpose in hand. If desired magnesium chloride $MgCl_2$ may be used in place of zinc chloride.

This fireproofing solution is used in the tanks holding the pulp or fibers from which the board is made, so that each fiber is coated with the solution before it is compressed into the body of the board. The coated fibers are subjected to a felting action in the tanks before they reach the compressing rolls. After the rolls have pressed out the excess of water, and solution, the compressed fibers contain a very large percentage of the solution, which readily dries on the individual fibers, and in the interstices of the finished board.

In carrying out this invention 75 parts by weight of $ZnCl_2$ and 60 parts by weight of NH_4OH, are used. For fireproofing "Insulite," 1 part of the 100 per cent solution is added to 3 parts of water to get a suitable strength for practical purposes. The excess solution that is squeezed out of the pulp by the compression rolls in making the board, is returned to the tank, so that the loss is quite small, while the fibers will be found to have retained a very large percentage of the $ZnCl_2$ present.

The following abstracts give a review of the U. S. patents relating to fireproofing paper and boards:

1. Fleury 52,553. Feb. 13, 1866.

A solution of glue or albumen is added to paper pulp containing a suitable quantity of soluble silicate. A dilute solution of a soluble sulphate or sulphuric acid is then added which precipitates the silicate forming a non-inflammable cement. The fibrous material is rolled into sheets by heavy, heated rollers or it is molded in a hydraulic press.

2. Irving, McNeil, Rich and Fay 60,635. Dec. 18, 1866.

The paper is manufactured from manila or hemp rope, in the following manner: The rope is first cut into pieces two inches in length; after which it is put into a rotary boiler, and boiled in a solution of alkali, under a steam pressure of twenty pounds to the square inch, for fourteen hours. The mass is then passed to the pulp engines, where it is reduced to half pulp, and saturated with a solution of rubber and borax, in addition to the usual rosin sizing. In passing over the paper machine, and before entering the second press rolls, the paper is passed through a solution of alum and borax, which closes up the surface, making the paper nearly water and fireproof.

3. Lowrey 71,892. Dec. 10, 1867.

Paper is made fireproof and waterproof by the addition of starch, casein and lime to the pulp.

4. Mayo 199,656. Jan. 29, 1878.

The process of rendering paper comparatively incombustible consists in subjecting it to a bath of a strong solution of salt, and after drying to a bath of equal parts of phosphate and the tungstate of soda.

5. Lucas 218,389. Aug. 12, 1879.

The process for producing a combined fire and waterproof paper consists in mixing asbestos or asbestos and paper pulp in a strong solution of common salt and alum dissolved in water, and making paper therefrom in the ordinary way and subsequently passing the paper through a bath of gum-shellac dissolved in alcohol.

6. O'Connor 225,858. Mar. 23, 1880.

The process for the manufacture of flexible non-inflammable paper consists in saturating paper wholly or partially unsized with a solution of silicate of soda of low specific gravity from 1.100 to 1.250 at 62 deg. F. and then drying the paper.

7. Hamilton 269,815. Dec. 26, 1882.

A fireproof board made from paper-pulp, glue, bichromate of potash, alum, and silica, mixed together and formed into sheets by pressure.

8. Carey 300,946. June 24, 1884.

A pulpboard composed of wood pulp, asbestos, or any other mineral fiber, and any suitable clay, mixed together while in a pulp state, then pressed or rolled into a sheet or board and dried, and afterward coated or saturated with asbestos, asphaltum, or any other fire or waterproof paint.

---

[1] Assoc. member TAPPI; Patent examiner, Patent Office, Washington, D. C.

9. NEWMAN 318,433. MAY 19, 1885.

The method of treating fibrous stock consists in first boiling in caustic lye, tallow soap, and chloride of tin, and subsequently in blue vitriol; second, in drying the fiber and again boiling it in water with lime, blood, and muriatic acid.

10. MERRILL 363,905. MAY 31, 1887.

A board is made from a composition comprising sixty per cent vegetable fiber, twenty per cent asbestos, ten per cent alum or copperas, and ten per cent plumbago or lamp-black, or Venetian red, or the equivalent. This composition is intimately mixed in an ordinary paper machine, and is then run through an ordinary paper mill into the form of the paper or board. It is then passed through driers, and is subsequently treated with a layer or coating of silicate of soda or tungstate of soda applied to one or both surfaces.

11. KEYS 645,035. MAR. 6, 1900.

The method consists in grinding wood in the presence of a fireproofing liquid, separating the slivers from the pulp held in the fireproofing liquid and then forming the pulp into the desired shape.

12. WINTER 655,845. AUG. 14, 1900.

The process of rendering cellulose fireproof consists in mixing it with sal-ammoniac in a receptacle, into which is introduced steam.

13. GORDON 671,548. APR. 9, 1901.

A composition for strengthening and preparing paper to render it fireproof and durable, consisting of silicate of soda one gallon, caustic soda ten pounds, sal-soda five pounds, rock-salt ten pounds, and water one gallon.

14. MCELROY 914,300. MARCH 2, 1909.

The process of fireproofing fiber consists in impregnating the fiber with an incombustible, water-insoluble, fluent, chlorination product of naphthalene containing hexachlor-naphthalene.

15. ROBERTS 921,002. MAY 11, 1909.

The method consists in forming an article of cellulose rendering it water-resistant, impregnating the article with a hot aqueous solution of an alkaline silicate, and then subjecting the article to rapid drying.

16. ROBERTS 970,643. SEPT. 20, 1910.

An article composed of fibrous cellulose which is partially carbonized and impregnated with sodium silicate.

17. ZELLER 1,116,349. NOV. 3, 1914.

A fireproofing composition comprising ammonium sulphate, ammonium phosphate, sodium phosphate and borax.

18. BORZNER 1,165,062. DEC. 21, 1915.

A packing product, consisting of waste paper, cornstalk, chemically and mechanically treated and rendered fireproof with ammonium chloride, silicate of soda or borax and reduced to a broken shredded condition for use.

19. MUNROE 1,335,910. APRIL 6, 1920.

The process of making a porous fibrous board with a foraminous material embedded in its body consists in floating a mass of sliver-like fibers mixed with other finer fibers in water on each side of the foraminous material while moving the latter; causing the water and a portion of the fibers to pass in opposite directions through the openings of the material to interlace some of the fibers in the openings; and applying pressure to the mass of fibers on each side of the material to form the board. When the fiber is thoroughly impregnated with ferrous oxalate, $FeC_2O_4.2H_2O$ it is found to be substantially fireproof. The ferrous oxalate, when raised to a temperature of approximately 160 deg. C. decomposes into two molecules of water, one molecule of carbon dioxide CO_2, one molecule of carbon monoxide CO and one atom of iron. Of these, only the carbon monoxide will support combustion, but this is overcome by the preponderance of other gases, liquids, and solids, produced which will not support combustion.

If desired, instead of applying the fireproofing material directly to the fiber, it may be formed thereon by the reaction of two or more substances capable of producing it. For instance, instead of applying the ferrous oxalate directly, ferrous sulphate which is water soluble may be mixed with the fiber stock which is then treated with oxalic acid to form the insoluble ferrous oxalate.

20. MUNROE 1,338,322. APRIL 27, 1920.

The process of making a fireproofing composition consists in adding an excess of ammonium hydroxide to zinc chloride to form a solution containing a complex compound of zinc oxide and ammonia as well as ammonium chloride and free ammonium hydroxide and nearly neutralizing the free ammonium hydroxide by adding a reagent capable of forming therewith a fire resisting compound.

21. OTTMAN 1,418,730. June 6, 1922.

A fireproof electrical insulating material comprising a sheet of cardboard impregnated with borax and ammonium phosphate, and having a coating comprising calcium carbonate, zinc oxide and linseed oil.

22. BRANDT 1,581,779. Apr. 20, 1926.

A waterproofed and fireproofed flexible paper for packing or wrapping materials which are susceptible to deterioration from moisture or water and are inflammable, such as explosives, comprising a flexible paper impregnated with an inorganic salt or salts, to render it fireproof and waterproof by treatment with a flexible waterproofing composition.

23. UPSON 1,687,599. Oct. 16, 1928.

The method of making a fire resisting fiber sheet consists in simultaneously forming a saturated web of fiber pulp possessing a high degree of tensile strength and a similar saturated web or mineral fiber pulp of low tensile strength, immediately superposing the webs while wet, one upon the other to cause the fibers of both to felt and interlace with each other and then subjecting the sheet to pressure to further the felting action and express moisture.

24. LICHTENSTADT 1,691,726. Nov. 13, 1928.

The process of fireproofing paper materials consists in impregnating them with a solution containing zinc ammonium phosphate, mono-ammonium phosphate, and ammonium chloride.

25. FREDERICKSON 1,715,080. May 28, 1929.

A waterproof and flame repellant building paper, comprising a relatively thick sheet of paper having a face thereof covered with a waterproof and flame-retarding coating of stearin pitch adapted to blister when exposed to fire and over which coating is applied a thin film of paraffin wax to impart to the pitch covered face of the paper a smooth, clean, non-sticky surface that is flame-repellant.

TAPPI Banquet Speaker

Harrison E. Howe, editor of *Industrial Engineering Chemistry*, will be the principal speaker at the banquet during the Fall Meeting of the Technical Association at Erie, Pa., on Thursday evening, September 4, 1920. Dr. Howe's subject will be "Big Industries." This banquet is being tendered the Technical Association by the Hammermill Paper Company.

Dr. Howe has had wide experience as a consulting chemist and has worked on many pulp and paper problems. He was formerly chemical engineer and manager of the Commercial Department of Arthur D. Little, Inc., Cambridge, Mass., and chairman of the Division of Research Extension of the National Research Council, Washington, D. C.

Lease No. 5 Mill of Union Corp.

[FROM OUR REGULAR CORRESPONDENT]

GLENS FALLS, N. Y., August 26, 1930.—The Imperial Wall Paper Company has leased the former No. 5 mill of the Union Bag and Paper Corporation, which has not been used for several months. The lease extends for only a few months and it is planned to use the building for warehouse purposes. Rumors to the effect that the Imperial concern planned to equip the building for the manufacture of wall paper proved to be without foundation, although a large number of residents are still hopeful that it may yet be used for some such purpose. It is planned to store several carloads of paper in the building immediately.

Measurement of Average Fiber Length*

By John B. Calkin[1]

Method

A representative sample containing about 5g. bone dry fiber is taken from the pulp on which the average fiber length is to be determined. The sample is placed in a 750 cc. Erlenmeyer flask and water added. The flask is stoppered and thoroughly shaken, giving it a double motion of the hand to obtain a twirling of the fibers. When thoroughly shaken some of the fiber is emptied, more water added, and the above repeated until the concentration is about 1 gram per 1,000 cc. of water. It is well at first to make up a standard containing 1 gram per 1,000 cc. motion before each addition, and then the tubes are stoppered.

The pulp is now ready to be transferred to slides. The double motion above referred to is given to each tube, holding a medicine dropper[2] in the same hand. After thorough shaking, the stopper is quickly removed, the medicine dropper inserted about an inch below the surface end in the center, and several drops are removed. Two slides with one drop each are made from each of the four test tubes. Each drop on the slide should contain about twenty-five fibers, more or less. One drop of the mixture is placed on the end of a slide (3" x 1") and the slide dried at 85 deg. C.

It is now necessary to stain and straighten out the fibers for measurement. The slide is placed on the stage of a dissecting microscope and about two drops of either Sutermeister's stain or Herzberg's stain are placed on the fibers so as to thoroughly cover them. There is an excess of stain present which must be decanted off. This is done by tipping the slide on one edge and then "necking" the drop and drawing out by means of a dissecting needle.[4] The slide is kept titled and examined under the dissecting microscope for any fibers which may have floated down. If any have floated away from the original drop of mixture, they must be returned by means of a dissecting needle. When the excess of stain is freed from fibers, it is absorbed on a good grade of filter paper. The slide is now placed under the dissecting microscope and the fibers straightened out parallel to the long edge of the slide and with their ends about even. After the fibers are straightened, a square cover glass (No. 2—¾") is placed over the fibers and they are "irrigated" by placing a small drop of stain on one edge (end) of the cover glass. If irrigation is done from two opposite edges (sides), air bubbles are more likely to form and an uneven staining will be the result.

The slide is now ready for measurement under the compound microscope. The best combination is a 16 mm. objective and a filar micrometer eye-piece (10x). It is considered good practice to always check the micrometer eye-piece with a micrometer slide before any measurements are taken. A mechanical stage is absolutely necessary to make a systematic study of the entire slide. The best plan is to start at the upper corner of the cover glass, and work down to the lower corner, take a reference point in the field and move the slide and then work up, and so on until the entire slide is covered. Fibers less than 0.5 division on the filar micrometer scale are not measured. Fibers longer than the micrometer scale must be measured by taking a reference point on the fiber being measured and thus measuring the total length by moving the fiber by means of the mechanical stage.

Two hundred fibers are measured.[5] The mean of these values is, of course, only relative and must be multiplied by the micrometer constant to obtain the average fiber length in pullimeters. Fiber distribution is obtained by counting the number of fibers 0.1 mm., 0.1 — 0.5 mm., and 0.5 mm., etc., and expressing the result as per cent.

Cautions to Observe

1. Obtain a representative sample of pulp.
2. Thoroughly mix in the Erlenmeyer flask.
3. Have proper concentration of mixture in test tubes.
4. Thoroughly shake the test tube before inserting dropper.
5. Insert dropper at center of tube well below the surface.
6. Remove all fibers from excess stain before absorbing it on filter paper.
7. Judiciously use dissecting needle so as not to break fibers in straightening for measurement.
8. Properly "irrigate" slide so as not to have the cover glass floating and thus disturb the fibers.
9. Check the eye-piece micrometer scale with a micrometer slide before use.
10. Be sure not to measure "foreign fibers" or to miss small fibers of sample.

Accuracy of Method

STATISTICAL ANALYSIS OF AVERAGE FIBER LENGTH MEASUREMENT
STATISTICS ON 200 FIBER-BASIS

Sample	Mean for 200 meas. (relative)	Mean for 200 meas. (in mm.)	ΣX^2 (relative)	For Single Measurement: S. D. (relative)	P. E. (relative)	P. E. (in mm.)	P. E. of 200 (in. mm.)
1	8.17	0.71	37,855.50	11.07	±±7.47	±±0.649	±±0.046
2	8.43	0.73	38,930.00	11.11	±±7.49	±±0.651	±±0.046
B	9.00	0.78	47,258.75	12.47	±±8.41	±±0.731	±±0.052
F	8.35	0.73	43,585.75	12.58	±±8.50	±±0.740	±±0.052

Formulae[6]

$$\text{mm.} = \text{relative} \times 0.087 \text{ mm.}$$

$$\text{S. D.} = \sqrt{\frac{\Sigma X^2}{n} - M_x^2}$$

of each measurement where

standard deviation	S. D. =
actual measurement	x =
sum of squares of actual measurements	x^2 =
mean (average) of measurements	M_x =
number of measurements	n =
±0.6745 S. D. of each measurement	P. E. =
± P. E. of each measurement	P. E. mean =

$$\frac{\text{P. E.}}{\sqrt{n}}$$

[6] From Mr. Owen of Maine Experimental Station, Orono, Maine.

Measurements on Commercial Sample of Spruce Fiber

(200 FIBERS USED TO OBTAIN EACH AVERAGE)

Sample	Av. fiber length	Fiber Distribution: 0.1 mm.	0.1-0.5 mm.	0.5 mm., etc.
No. 1	0.71	30.5%	36.0%	33.5%
No. 2	0.73	28.5%	37.5%	34.0%
B	0.78	27.5%	39.5%	33.0%
F	0.73	34.0%	37.0%	29.0%
Mean for 800 fibers	0.74	28.5%	37.5%	34.0%

Formulae

$$\text{P. E.} = \pm 0.6745 \sqrt{\frac{d^2}{N-1}}$$

$$\text{P. E.} = \pm \frac{0.03 \text{ mm.}}{\sqrt{4 \text{ determinations}}}$$

$$\text{P. E.} = \sqrt{(PE)_B^2 + (PE)_B^2 + (PE)_B^2 + (PE)_F^2}$$

P. E. of mean, not single observations.

Acknowledgment

The writer wishes to express his appreciation for the assistance of Messrs. Graff and VanArsdel of the Brown Company, and to Mr. Owen of the Maine Experiment Station for assistance and reading of the original part of this paper, and to G. A. Richter of the Brown Company for permission to publish this work.

* Part of thesis submitted at the University of Maine.

[1] Junior Member TAPPI; Dennison Manufacturing Co., Framingham, Mass.

[2] Cf. also Graff and Snodgrass, "Factors in the Measurement of Pulp Fibers," Paper, Vol. xxiii, No. 13, pp. 11-15 (December 4, 1918).

[3] The dropper should have a 4 mm. hole.

[4] Chamot, E. M., Elementary Chemical Microscopy, pp. 279-281.

[5] See accuracy of method following.

Current Paper Trade Literature

Abstracts of Articles and Notes of Papermaking Inventions Compiled by the Committee on Abstracts and Bibliography of the Technical Association of the Pulp and Paper Industry

Clarence J. West, Chairman

For photostatic copies of articles appearing in the Abstract Section, address the chairman of the Abstracts Committee, Dr. Clarence J. West, National Research Council, 21st and B Streets, Washington, D. C. The charge for this service is 25 cents per page. Copies of United States patents may be obtained from the U. S. Patent Office, Washington, D. C., for 10 cents each. Send currency, not stamps.

Paper Testing

Measurement of Strength and Stiffness of Fiber Boards by Means of Static Bending. C. C. Heritage, E. R. Schafer and L. A. Carpenter. Forest Products Laboratory, Madison, Wis. Paper Trade J. 89, No. 17, 50-52 (Oct. 24, 1929); Pulp Paper Mag. Can. 28, 667-671 (Oct. 31, 1929).—A method has been developed for the evaluation of the strength and stiffness of fiber boards. These properties are determined by a static bending test, from which the moduli of transverse strength, rupture and elasticity are obtained. The results are expressed in terms that evaluate the structural properties of the material and not merely the properties of the piece under test. The values can be regarded with little or none of the qualifying data necessary in the empirical methods applied in mills at the present time. The method is simple and inexpensive and has been shown to be sufficiently accurate for the purpose. It may be applied to boards of a wide variety and is particularly useful in determining the strength of insulating and wall boards. A further application is in the testing of pulps for strength, where it has been found to have a particular value in the evaluation of groundwood.—A.P.-C.

Measurement of the Contrast Ratio of Opaque and Translucent Papers. James d'A. Clark. World's Paper Trade Rev. 92, 996-1004 (Sept. 20, 1929); Paper Trade J. 89, No. 20, 62-64 (Nov. 14, 1929); Pulp Paper Mag. Can. 28, No. 22, 835-836-858 (Nov. 28, 1928).—The "contrast ratio" is considered to be the best measurement to estimate the printing quality of paper. The U. S. Bureau of Standards instrument for determining it is suitable for papers of which the contrast ratio is not much above 0.85 (about the ratio for a medium weight bond); but for more opaque papers the range 0.85 to 1.0 is covered by only 2.3° of arc, and as most news print papers lie between 0.90 and 0.95, or only 0.9° of arc, the method is unsuitable for accurately measuring their capacity. The following simple and convenient method has been devised for measuring the contrast ratio of opaque papers. A piece of paper, made from materials which keep as permanent as possible, the color and texture of which approximate to the average of samples to be tested, and having a contrast ratio of about 0.85 or slightly greater, is selected as a sub-standard (a fairly opaque, dull-colored bond paper of slightly yellowish cast is very suitable). Its contrast ratio is very accurately determined, using the ordinary method, and taking a large number of readings. A special attachment to replace the black and white areas of the Bureau of Standards instrument by a uniformly illuminated glass screen is inserted and the sub-standard, together with the sample to be measured, is placed in the holder of the instrument so that each paper covers one of the halves of the photometer field. If the fields are matched by rotating the arm of the photometer and the sample has the same opacity as the sub-standard, the setting of the instrument will be 45°, and if the sample were perfectly opaque the reading would be 0°. If the sub-standard has a contrast ratio of 0.86, the range 0.86 to 1.00 is thus covered by 45° of the photometer scale instead of about 2.2° by the usual method.—A.P.-C.

Whiteness of Paper. L. Blin Desbleds. World's Paper Trade Rev. 92, 754-758 (Aug. 30, 1929); Pulp Paper Mag. Can. 28, No. 23, 875-876 (Dec. 5, 1929); Paper Trade J. 89, No. 20, 55-56 (Nov. 14, 1929); Paper Milll 52, No. 45, 10, 39 (Nov. 9, 1929).—A brief description of the use of the photo-electric photocolorimeter for determining the whiteness of paper.—A.P.-C.

Determining the Translucence of Paper. W. Holwech. Paper Trade J. 89, No. 10, 55-58 (Sept. 5, 1929).—A mathematical theoretical discussion of the absorption of light by paper, with an explanation of the use of the Konig-Martens polarization photometer for measuring the absorption coefficient.—A.P.-C.

Gloss of Paper: An Exact Method of Determination. L. Blin Desbleds. Paper Maker and Brit. Paper Trade J. 78, 151-155 (Aug. 1, 1929); International No. 36-39 (1929).—A description of the T.C.B. photo-colorimeter, with a discussion of its merits as a means of measuring the gloss of paper.—A.P.-C.

New Methods of Analytical Control in the Manufacture of Sulphite Cellulose. E. Graap. Papier-Fabr. 27, Fest -u. Auslandheft, 115-119 (1929).—Disadvantages of the usual methods and advantages of electrometric methods in the analysis of sulphite liquors are discussed. The preparation of the necessary apparatus and solution, the use of the quinhydrone and calomel electrodes and methods for the determination of calcium oxide, sugars, etc., in sulphite cellulose waste liquors are described.—C.J.W.

Influencing of Drying on the Strength of Paper. E. Rieth. Papierfabr. 27, 385-387 (1929). Samples of a uniform paper from unbleached sulphite cellulose were dried under different conditions and their moisture content, tearing length, extension, etc., were measured. The same material varies in tearing length between wide limits according to the conditions of drying. Not only is the manner of drying (*e. g.*, in the air, on the cylinder etc.) important, but the time of contact with the cylinder has a considerable effect; the longer is this time the greater is the tearing length of the paper and the lower are its moisture regain, extensibility and bursting test numbers. Strength is dependent on the degree of swelling of the fibers and this swelling is influenced both by the duration of drying and the nature of the grinding process.—C.J.W.

Influence of Atmospheric Humidity on Paper. L. E. Walter. Papierfabr. 27, 369-371 (1929). Absorption and desorption of moisture takes place more rapidly in the case of strips of paper cut transversely than in that of lengthwise strips, although the same final values are reached in both cases. At low room humidity the rate of absorption of water by paper is slower than, at average values approximately proportional to, and at high humidities more rapid than, that of increase of humidity. The extension produced is approximately proportional to the quantity of water absorbed. Absorption and desorption at ordinary room temperatures are completely reversible processes; extension is irreversible.—C.J.W.

Chemical Determination of Mechanical Wood Pulp in Paper. E. H. Riesenfeld and T. Hamburger. Cellulosechemie 10, 125-126 (1929).—The microscopical method gives values depending on the skill of the worker to within ± 5 per cent but the chemical method of Halse gives values which are accurate to a fraction of a per cent, provided that the lignin contents of the individual constituents of the paper are known. If, however, it is necessary to assume values between 1.6 and 8 per cent

for the lignin content of sulphite cellulose and 26.6 per cent for that of mechanical wood pulp, as is suggested, errors of the order of 20 per cent may be obtained in the values for the amount of mechanical wood pulp present, and entirely wrong conclusions may be drawn.—C.J.W.

Qualitative Method for the Determination of Paraffin in Paper. Frank R. Filz. Chemist-Analyst 18:4 (1929).—Digest the sample in chloroform, which dissolves the paraffin, and add an excess of ethyl alcohol to the evaporated solution which precipitates the paraffin.—C.J.W.

Water Permeability of Paper Sacks. Curt Prussing. Zement 18:568-569 (1929).—The penetration of moisture through sack paper can be followed by the decrease in fineness of cement contained therein. Also the time required by heated cement to make a phenolphthalein solution become red through paper is a good index to the permeability of the paper to water. Colored paper is more pervious than is plain paper.—C.J.W.

Paper Specialties

Artificial Board. Clarence C. Vogt, assignor to Armstrong Cork Co., U. S. pat. 1,718,011, June 18, 1929.—Plant material such as corn stalks is cooked and the fibers are separated so as to produce a fibrous mass containing the natural binder of the plant fibers, suitable phenolic material is added to the mass, it is shaped into board form, and the board is baked to form a water-repellent phenolic condensation product binder from the natural binder.—A.P.-C.

Artificial Board. Clarence C. Vogt and Ernest J. Pieper, assignors to Armstrong Cork Co. U. S. pat. 1,718,012, June 18, 1929.—The process is generally similar to the one described in the preceding patent, and a toughening agent such as stearin pitch, wax tailings or asphalt is also added previous to shaping and baking.—A.P.-C.

Laminated Boards Formed With Sodium Silicate Adhesives. Charles D. Wood, assignor to Grasselli Chemical Co. U. S. pat. 1,709,892, April 23, 1929.—In cementing together piles of material such as paper under pressure, a concentrated sodium silicate solution is applied to the material at a temperature substantially above room temperature but not exceeding 65°C.—A.P.-C.

Adhesive Fly Paper. W. W. W. Semmler. Eng. pat. 295,-651, Aug. 16, 1927.—A coating of phosphorescent or luminous material is placed under the adhesive coating and is separated from the latter by a layer of material such as cellon, cellophane, celluloid, ceresin, paraffin, stearin, wax or lacquer.—A.P.—C.

Stencil Sheet. S. Horii. Eng. pat. 289,511, Jan. 24, 1927.—Esters such as cellulose nitrate or acetate or mannan acetate are used with alcohols derived from oils or waxes of marine animals such as oleyl alcohol, cetyl alcohol, or selachyl alcohol, and these and other suitable associated ingredients may be used as a coating on Yoshino paper or may be added to the paper pulp in the beater.—A.P.-C.

Manufacture of Surface Paper and Board. George F. Blombery. U. S. pat. 1,720,716, July 16, 1929.—A liquid finishing composition is used comprising rubber latex, colloidal clay and other sizing or surfacing materials such as casein, talc and blanc fixe.—A.P.-C.

Manufacture of Carbon Paper. J. Oddon. Papier 32, 875-880 (Aug. 1929).—Practical directions regarding the manufacture of the base paper and of its coating with the coloring emulsion.—A.P.-C.

Process for Making Impervious Boxboard. George H. Ellis. U. S. pat. 1,717,878, June 18, 1929.—A web of absorbent non-adhesive stock is first applied to the felt of a cylinder paper machine and on this there is then deposited an impervious adhesive web containing liquid bituminous material and another web of pervious stock over the adhesive layer. The webs are compressed and dried together to form a multiply board suitable for making boxes.—A.P.-C.

Method and Apparatus for Making Boxboard. F. B. Wells assignor to The Ohio Boxboard Co. U. S. pat. 1,718,096, June 18, 1929.—After deposition of a layer of pergameneous material, excess water is withdrawn from the layer, an overlying layer of similar material is deposited on the first layer, and over these two layers there are deposited layers of filler material to provide the desired thickness, excess water is removed and the composite web is treated in a usual manner to form a finished product.—A.P.-C.

Fiber Board. William M. Shoemaker, Jr., assignor to National Vulcanized Fiber Co. U. S. Pats. 1,714,640 and 1,714,641, May 28, 1929.—A solution such as 70° Baume-zinc chloride solution is projected simultaneously against opposite sides of each of a number of cellulose paper sheets at from room temperature to about 35°C. and the sheets are joined under pressure. No. 1,714,640 covers the process and No. 1,714,641 the apparatus for carrying it out.—A.P.-C.

Paper for Stencil Sheets. S. Horii. Eng. pat. 299,520, July 29, 1927.—Japanese stencil paper is made by subjecting the base tissue to the wet beating process until the degree of wetness reached 40 to 60 beating units by the Schopper-Riegler tester. The paper may be coated with a composition comprising waxes, gelatin or cellulose esters together with tempering agents.—A.P.-C.

Composition for Coating Carbon Paper, Etc. Harold W. A. Dixon. U. S. pat. 1,718,949, July 2, 1929.—An apparatus and various treatments are described for preparing a colloidal composition of oil and wax in successive batches.—A.P.-C.

Stentil Sheets. H. Simon. Eng. pat. 286,466, March 15, 1927.—In making stencils comprising Yoshino paper coated with a composition which includes oily softening agents, a protective coating impervious to the oily material (such as protein or resinous material or cellulose esters or ethers) is applied to the sheet to protect the typewriter platen, etc., from action of the oily substances. Examples are given of protective compositions formed of an alkaline casein solution with glycerol or sugar, an alcohol solution containing varnish and sodium oleate, and an alcohol solution of palmitic acid and sodium oleate.—A.P.-C.

Manufacture of Double-Sided Art Paper. Anon. Paper Maker and Brit. Paper Trade J. International No. 29-34 (1929).—An illustrated description of the Flinsch-Koebig type of horizontal double-side coating system.—A.P.-C.

Stencil Sheet. Richard Damme. U. S. pat. 1,719,926, July 9, 1929.—Stencil sheets are prepared with a composition comprising collodion, oleic acid, lithopon, soap, castor oil, glycerol, amul acetate and a dye.—A.P.-C.

Dry Stencil. Henry H. Hawling. U. S. pat. 1,720,897, July 16, 1929.—A base paper is treated with a composition comprising casein, an alkali hydroxide and sodium tungstate.—A.P.-C.

Roofing Felt, Paper or Floor Covering Material. C.A.E. Leech and D. Leech. Eng. pat. 299,178, Oct. 13, 1927.—Fibrous reinforcing material such as cotton, hessian or string is embedded in the material while in the soft pulpy state.—A.P.-C.

Stencil Sheet. S. Horii. Reissue 17,267, April 9, 1929, of U. S. pat. 1,587,954, June 8, 1926.—A base sheet is impregnated with a composition including an ester of polysaccharides and naphthenic acid glycerides.—A.P.-C.

Gummed Paper. William W. McLaurin. U. S. pat. 1, 719,-712, July 2, 1929.—Paper is coated on one face with a water-soluble adhesive and the latter is protected by a coating of soap.—A.P.-C.

Coating Roofing Felt or Paper. John C. Black and Wirt D. Rial, assignors to Pan American Petroleum Co. U. S. pat. 1,-714,206, May 21, 1929.—A body of melted asphalt is protected against any substantial oxidation by displacing any air in it by introduction of a non-oxidizing gas such as a stored combustion gas mixture, and the asphalt is kept at a temperature of about 200°C. by heating and circulating it through a pipe system

and regulated quantities of the asphalt are introduced into a coating tank to maintain a constant level in the tank through which the material to be coated is passed.—A.P.-C.

Waterproof and Flame-Resistant Building Paper. Otto A. Frederickson assignor to The Wire-Mold Co. U. S. pat. 1,715,080, May 28, 1929.—A relatively thick sheet of paper has one face with a waterproof and flame-retarding coating of stearin pitch adapted to blister when exposed to fire, with an overlying thin coating paraffin to give a smooth and non-sticky surface.—A.P.-C.

Method and Apparatus for Saturating Fibrous Materials in the Manufacture of Roofing. August E. Schutte assignor to The Flint-Kote Co. U. S. pat. 1,715,392, June 4, 1929.—The sheet is passed through a bath of heated molten asphalt and the surface of the sheet is scraped below the level of the bath to remove gas bubbles forming thereon and clinging thereto in its passage through the bath. After passing through the bath the saturated sheet is cooled by blast of cold compressed air.—A.P.-C.

Sheet Roofing. R. C. Neptune. U. S. pat. 1,710,104 April 23, 1929.—The side margins of one face of strip roofing are left bare, and the portion between the bare margins is covered with slate or other surfacing material, one bare margin being narrower than the other.—A.P.-C.

Fiber Floor Covering. J. M. Taylor, assignor to Diamond State Fiber Co. U. S. pat. 1,710,595, April 23, 1929.—Floor covering of vulcanized fiber having a durable design is made by taking a number of sheets, at least one of which carries the markings or design of the desired pattern, treating them with a vulcanizing substance such as zinc chloride, and superimposing the treated sheets to form a sheet of vulcanized fiber showing the pattern on at least one face.—A.P.-C.

Composition for Waterproofing Paper Conduits or Tubing, Etc. Wallace B. Van Arsdel, assignor to Brown Co. Can. pat. 284,377, Oct. 30, 1928; U. S. pat. 1, 714,702, May 28, 1929.—A waterproofing composition that is hard, non-sticky and wax-like at ordinary temperature, remains tenacious at about 100° to 140° F., and tough at about 40° to 50° F., is composed of a mixture of about 40 to 70 per cent petroleum asphalt, 15 to 40 per cent paraffin and 10 to 30 per cent of a finely divided filler (bentonite or fullers' earth).—A.P.-C.

Process of Treating Highly Porous Paper-Like Material. K. L. Moses. U. S. pat. 1,716,654, June 11, 1929.—In producing a paper-like web of sufficient porosity to permit it to be saturated with a filling material containing rubber and water but having sc little strength that it will hardly hold together when wet, the material is strengthened by incorporation of a latex solution applied by spraying and is then impregated with additional filling material.—A. P.-C.

Finishing Mineral-Coated Paper. Donald D. Bradner assignor to The Champion Coated Paper Co. U. S. pat. 1,719,166, July 2, 1929.—Paper such as that coated with a material filler is contacted, while the coating is in plastic condition, with a solid non-adhering surface having a finish substantially the same as that desired on the mineral-coated paper; the coating is rendered non-plastic, as by drying or cooling, and is then separated from the associated solid surface (which may be formed of chromium, monel metal or rubber.—A. P.-C

Reducing the Swelling Tendency of Paper or Other Cellulosic Materials. I. G. Farbenindustrie A.-G. Eng. pat. 297,463, Sept. 23, 1927; Fr. pat. 653,817, May 3, 1928.—The material is treated with aqueous or alkaline solutions of resinous condensation products or materials capable of forming such condensation products and the products are subsequently hardened by heat, with or without treatment with formaldehyde. Condensation products of sulphur and phenol and formaldehyde or urea and formaldehyde may be used. Catalysts to accelerate the condensation or softening agents to reduce the brittleness of the products also may be added.—A. P.-C.

Impregnating Paper for Bag Manufacture. Alfred Holter. U. S. pat. 1,714,222, May 21, 1929.—Paper is prepared for subsequent folding and forming by impregnating one surface of a paper web with an aqueous solution of a material such as soap and glue which can react with soluble aluminum compounds to form insoluble reaction products, and impregnating a second web with a solution containing alum or other soluble aluminum compound, and then bringing the two surfaces into contact with each other immediately prior to folding or otherwise fabricating mto webs (without drying prior to folding).—A. P.-C.

Producing Pattern Effects on Waxed Paper. Elsmore D. Lake. U. S. pat. 1,711,953, May 7, 1929.—A paper sheet is treated with a hot wax which normally renders the sheet transparent; certain areas of the sheet are cooled and other areas are subjected to pressure at the moment of cooling.—A. P.-C.

Treatment of Glassine Paper. Charles E. Sweet assignor to United States Envelope Co. U. S. pat. 1,712,178, May 7, 1929.—One surface of glassine paper is treated to reduce glare (suitably by an aqeuous solution of calcium chloride) and the other surface is treated to increase transparency, *e.g.*, by the use of tannic acid and terpin hydrate.—A. P.-C.

Mineral Fiber Firproof Paper. Plastic, Inc., Eng. pat. 312,901.—Very thin papers or pulp blocks having heat-resisting qualities and capable of a high finish by calendering are obtained by mixing in the beater asbestos fiber, mineral wool, or other mineral fiber and kelp, which may have been previously dried. The kelp used is preferably laminaria containing both alginic acid or compounds thereof and algulose. Sodium carbonate, sodium hydrate, potassium carbonate, sodium phosphate or other solvent for alginic acid is added and the beater is run until the kelp, particularly the alginic acid constituent thereof, is dissolved and completely absorbed in the asbestos. A precipitant for the alginic acid, such for example as a solution of calcium acetate, or zinc sulphate, aluminum sulphate, or a dilute acid such as sulphuric acid, is then added and the mass thoroughly mixed, after which it is run through a jordan engine to the paper machine. A quantity of cotton fiber, flax, etc., not exceeding 40 per cent of the finished product may be added in the beater.—A.P.—C.

Rendering Paper Containers or Wrappings Impermeable. W. Dautwitz. Eng. pat. 301,861, Dec. 7, 1927.—Coating is effected by use of hardened oils or fats such as hardened cocoanut oil, peanut oil or train oil (suitably after a preliminary impregnation with glue, gelatin, cellulose esters or like materials).—A.P.-C.

Impregnated Paper for Recording Impressions by Electric Currents. R. Pollack-Rudin. Eng. pat. 301,749, Dec. 3, 1927.—A paper strip is impregnated with a portion only of the components forming the substance for chemical reaction and necessary ions for the reaction are derived from one or more electrodes used. Among the materials suitable for such use together are: dimethylghoxime and nickel; tannin and iron ammonium molybdate and molybdenum; organic dyes or their lueco deriviations also may be used and reaction with them effected by oxygen or hydrogen ions evolved at the electrodes.—A.P.-C.

Glossing Paper. Siebenhirtner Chem. Industrie-Werk G.m. b.h. Fr. pat. 651,273, March 23, 1928.—A glossy or satin surface is obtained on paper by adding saponified stearin and salts of heavy metals to the pulp. In an example, stearin saponified with sodium or potassium hydroxide, and zinc sulphate with sufficient sodium or potassium silicate to give the necessary consistency are used.—A.P.-C.

Vulcanized Fiber. I. G. Farbenindustrie A.-G. Fr. pat. 654,411, May 18, 1928.—The quality of vulcanized fiber is improved by soaking it in solutions or organic compounds capable of forming insoluble products, and forming these compounds in the fiber.

The fiber may be first swelled by heating with water and removing the water afterwards. Examples are given of the formation in the fiber of urea condensation products, phenol-formaldehyde resins, etc.—A.P.-C.

Composite Waterproof Sheet Material. Charles H. Rayner. U. S. pat. 1,714,240, May 21, 1929.—Loose hair is spread on a reinforced paper sheet backing or binding sheet, the material is punched through with barbed points carrying loops and ends of hair strands through it, the loops and ends projecting through the sheet are singed, the singed hair and back are covered with asphalt and an artificial leather composition is applied over the asphalt.—A. P.—C.

Molded Receptacles of Wood Pulp and Casein. John Olson. U. S. pat. 1,705,780, March 19, 1929.—A plastic mixture formed of wood pulp, casein and water is pressed between dies under very high pressure so that the casein is caused to permeate the wood pulp and form a unitary rigid article, and the dies and molded article are relatively moved at high speed to finish the article.—A.P.-C.

Hazards to Shipping Containers. T. A. Carlson and I. B. Lanphier, Forest Products Laboratory, Madison, Wis. Paper Mill 52, No. 36, 2, 6, 8 (Sept. 7, 1929).—An explanation of the methods for making a survey, which is believed will yield information of interest in the forest industry (Where the more efficient utilization of low-grade and waste material is paramount) and also in problems of transportation affecting the railroads, manufacturers and consumers throughout the United States, illustrated by the results of one such survey comprising shipments in 56 carloads of canned goods to a large Chicago grocery warehouse.—A.P.-C.

Resinous Condensation Product of Phenol and Cellulose. Emil E. Novotny and Charles J. Romieux. U. S. pat. 1,721,315, July 16, 1929.—A mixture comprising only a phenolic compound such as carbolic acid and cellulose is heated to above 120° C. (suitably about 250°) to cause reaction and formation of a soluble, fusible, resinous condensation product, which may be further modified by use of ammonia, formaldehyde, hexamethylenetetramine, furfural, etc.—A. P.-C.

Articles of Papier-Maché, etc. G. Ohlhaver. Eng. pat. 295,-259, Aug. 5, 1927.—Molded articles of papier-maché are hardened and rendered "hornlike" by saturation with an oil varnish and heating (suitable for 1 to 2 days at 80° to 120° C., or for a shorter time after preliminary standing for a long time at ordinary temperature). Products of lower quality may be made by mixing the varnish with the material before molding.—A. P.-C.

Molded Articles of Indurated Fiber. Horace H. Clark assignor to Clark Fiber Products Corp., U. S. pat. 1,717,092, June 11, 1929.—Pulp formed from cotton rags is digested in an aqueous solution containing about 5 per cent caustic soda and about 3 per cent sodium carbonate for about 4 hours under a pressure of 30 to 50 lbs. per sq. in.; a blank is formed from the pulp by flowing it into a mold having perforated walls through which most of the water passes; the blank is dried and impregnated with an indurating liquid such as zinc chloride solution and is finally compacted and shaped under pressure.—A. P.-C.

Manufacture of Paper for Making Yarn or Twine. John A. Heany assignor to World Bestos Corp. U. S. pat. 1,716,776, June 11, 1929.—The invention relates more particularly to the manufacture of strips of asbestos suitable for twisting into yarn or cord. The stock is formed into strips of alined fibers on a suitable carding machine. The strips are flattened and compacted by passing through a press and at the same time moistened with an adhesive liquid, e.g., a starch or dextrine solution, passed through one or more presses and then around steam-heated dryer rolls, and finally wound into rolls.—A. P.-C.

Machinery

Thorne Barking Machine. Anon. Pulp Paper Mag. Can. 28, 635-636 (Oct. 24, 1929).—A discussion of the merits of the Thorne barker, and more particularly of the savings in wood which it effects. The barking loss, even when so-called rebarking is required, never exceeds more than 1.5 per cent to 2 per cent.—A. P.-C.

Improvement in Pulp and Paper Screens. The Watford Engineering Works, Ltd., and J. Paramor. Belg. pat. 358,409, March 31, 1929.—In order to be able to vary the amplitude of the vibratory motion of the screen, compound eccentrics are used, the effective strokes of which can be changed while the machine is in operation by rotating internal and external eccentric elements in opposite angular directions.—A. P.-C.

New Rolling Action Screen. L. A. Fischer, Glens Falls Machine Works. Paper Mill 52, No. 42, 16, 36 (Oct. 19, 1929.—A brief description of the new Glens Falls rolling action flat screen, the chief feature of which is the use of a cam and roller of relatively wide face compared with the height of the reciprocating part, together with a discussion of its merits.—A. P.-C.

Recovery of Fibers from White Water. Adolf M. R. Karlstrom. U. S. pat. 1,717,223, June 11, 1929.—White water in admixture with air is introduced into a tank in an upwardly directed current, and a reduced pressure is maintained in the tank so that the fibers are lifted up to the surface by adhering gas bubbles, whence they are separated.—A. P.-C.

Removable Type of Fourdrinier Paper Machine. Alonzo Aldrich and Earl E. Berry assignors to Beloit Iron Works. U. S. pats. 1,715,528 to 1,715,531, June 4, 1929.—The purpose of the inventions is to provide a construction of fourdrinier tables so that the number of steps required in changing the wire is considerably reduced. The essential feature lies in providing tracks, for rolling out the table, which lie between the upper and lower runs of the wires, so that the table lies on the tracks when the machine is in operation. In the construction described in No. *1,715,529* the outside tracks telescope inside the inside tracks, and the operations required in changing a wire are as follows: the outer tracks are pulled out on the front side of the machine, the table is rolled out over them, the inner tracks are pulled out at the rear of the machine to allow a new wire to be strung in position, the inner tracks are run back into position, the table is rolled back over them, and the outer tracks are telescoped back into the inner ones. In the construction described in No. *1,715,530* the outside tracks normally lie at the side of the inner tracks when the machine is in operation, and the operations required in changing a wire are as follows: the outer tracks are run out on the front side of the machine, the table is rolled out over them, the inner tracks are swung to lie close to the supporting beam at the rear of the machine, the new wire is strung in place, the inner tracks are swung back into position across the machine, the table is rolled back into position, and the outer tracks are run back beside the inner tracks. According to No. *1,715,531* both the inner and outer tracks are pivoted at the beam along the front of the machine, the inner tracks normally lying across the machine and the outer tracks along the front beam when the machine is in operation. In order to change the wire the outer tracks are swung out, the table is rolled out, the inner tracks are swung to lie close the front beam of the machine, the new wire is strung in place, the inner tracks are swung back across the machine, the table is rolled back into position and the outer tracks are swung back against the front beam.—A.P.-C.

New Millspaugh Machine. Harold O. Bing. The Paper and Textile Machinery Co. Paper Mill 52, No. 42, 10, 40 (Oct. 19, 1929).—A brief discussion of the merits of the new paper machine recently developed by the Textile and Paper Machinery Co., which, it is claimed, can make a wide variety of grades and weights of paper, such as news, kraft, specialties, tissue or box board, at speeds up to 2,000 feet per minute. The machine is not described.—A.P.-C.

Section of the

COST DEPARTMENT

of the

American Paper and Pulp Association

Edited by T. J. Burke C. A. Director Cost Dept.

Inventories, Their Preparation, Compilation And Valuation*

By Robert H. Tuttle[1]

The subject of inventory value is a very important one today. It is important that it be counted right and priced correctly because in the retail and wholesale businesses it is the measure of profit. In all lines of business it is a balance sheet item of the current and inventory asset designation and consequently has a very difinite position in the ratios of current assets against current liabilities.

Being a part of current and inventory assets it is, therefore, one of the items of the so-called revolving asset group. The familiar cycle in a manufacturing industry of revolutions from cash to material, labor, and burden or work in process, and then to finished goods, and then to accounts receivable, picking up a profit, converting into cash, and diverting the profit to the owners is a very apt illustration. This is understood but not appreciated enough by business men. The significance, of course, is that the amount of profit in a given period of time is entirely a matter of speed of rotation of these assets, or turnover, as we call it. It is important, then, that we have difinite information on inventories in order that the amount of money invested in materials and work in process and finished goods be kept at as small a figure as is possible in order to speed up the rate of turnover. If cash is invested too heavily in any one of the other items in the turnover, it slows down the wheel materially and may even stop it altogether.

In 1913 the rate of turnover of raw material into cost of goods sold in the United States as a whole, considering all forms of industry, was a little less than 5. In the last year for which I have figures, the turnover rate was a little more than 3. This is a subject which we should take seriously to heart because in spite of our boasted efficiency in many ways, we are not doing business on as small a capital as we used to a few years ago. There are many causes for this which are not the point, but the matter of proper expression of inventories will help the management in this important struggle.

In cost accounting we are concerned with three kinds of inventories, namely, raw material, work in process, and finished goods. The first two are the harder for compilation and will be discussed first.

Preparation

Much can be done to assist in the actual taking of inventories by reasonable and adequate preparation in advance. The larger the inventory, the more necessary is this preparation activity. The storeroom or places where material is stored should be neatly cleaned, and the merchandise arranged properly so that it can be counted with a minimum of effort. This also implies that any merchandise temporarily out of the usual storeroom be brought back to its proper place in the storeroom. It will be necessary also to decide on the date of inventory and whether or not there will be a shut-down of manufacturing, and if so, what days shall be allocated to this inventory work. This raises the suggestion that it is often much better to take inventory at a period of low activity in order to avoid the expensive inconvenience of a temporary shut-down in periods of great activity. More important than these suggestions is the need of properly planning the personnel of the inventory takers. The day is past when inventory can be taken by any clerk or any laborer, as they must be people who can count correctly and intelligently. Many people resent the idea of being compelled to work on inventory, and as a consequence they are indifferent and careless. Thought should be given to pick out people of the right character whether clerks, laborers, mechanics, or what not, in order that the work be done conscientiously and intelligently.

The idea that the inventory should be taken at a time when the inventory itself is low is well received, even to the extent in some instances of taking the inventory thirty days or sixty days before the fiscal closing if it should happen that the earlier date was a period of somewhat less activity. In such instances, the actual book inventory at the fiscal closing date might be used, ignoring any differences that might arise in that short period. The suggestion is also useful in any industry as it enables the inventory to be taken without the need for such great speed as is usually required at fiscal closing time. The inventory at fiscal date may be obtained from the physical inventory by adjustments for the month or so between the date. It is becoming the practice in a great many places to have written instructions, carefully prepared, given to all inventory employees some time in advance of inventory time. This is an excellent idea if it is the result of experience and is prepared by someone who knows all of the multitude of details in that particular industry. I have seen this idea vitiated by inventory instructions printed which were entirely useless and even absurd, due, of course, to having been written by someone who had not himself gone through all of the motions of the inventory work.

Counting

Any system of inventory counting should provide for a duplicate count. It is too easy for a person to make a mistake in counting either by carelessness or by overlooking items to take any chances on errors in the result due to errors in count. How easy it is for a counter, having his mind on something else, to

* N. A. C. A. Bulletin.
[1] Tuttle, Wolfe & Co., Minenapolis, Minn.

count the articles in the bin thus: 76, 77, 78, 79, 70, 71, 72. Also it is too easy for some people to assume that neat piles of merchandise contain the same number of pieces in each pile through to the back side of the bin, which may be far from the truth

The tag system is in very common use and is to be highly recommended. The tag system, where a tag of at least two parts or in duplicate, both numbered alike provides that the count shall be placed upon one portion of the tag affixed to the stock and the other portion passed on to the office bearing part number or name, to be checked by the second counter later. This system is very helpful, but is not entirely fool proof. Instances have arisen in my knowledge where the second counter is tired, or hurried, or for other reasons does not take the trouble to recount the entire quantity of a certain item but glances at the articles and feels that the quantity of the first counter is about right and checks it as his count. This is sometimes avoided by the use of a three part inventory tag so the second counter has no knowledge of the first counter's count, and the three parts of the tag are brought together afterward for comparison.

In counting twice, it is necessary that the second count be made at a reasonable time after the first count. The lapse of anywhere from one hour to one day should be sufficient, but in any event, the second counter should not follow immediately after the first counter because the temptation will arise in the mind of the second counter that since he has personally seen the first counter, make his count, then there is no need for the second counter to bother to personally count the merchandise.

Some plan should be worked out to avoid spending much time or effort in inventorying minor materials (not expense materials) such as screws, nuts, bolts, washers, nails, glue, ink, thread, etc. These items of direct material could be very readily charged to expense when purchased even though they are not expense materials. Inventory effort in counting such merchandise might be much better spent on the more important items.

I believe it is necessary that as far as possible we should avoid the common inventory-pad-listing-as-counted system. That time-honored system is to full of errors for convenience. For instance, I once saw an inventory taken in that manner which had eight kinds of errors in it due to that system. These errors were:

1—Error in count (Count too high or too low).

2—Item omitted entirely (overlooked by some very simple mistake).

3—Item counted twice. This will happen where more than one person has inventory sheets and assumes that the other person has not counted some special item. I have even seen merchandise counted three times through such mistakes.

4—Errors in classification. This applies in instances where inventory is classified into different groups.

5—Described wrong, using the wrong name or the wrong part number.

6—Error in price due to being copied wrong, or figures transposed, or misunderstood, or because the price clerk could not read the handwriting.

7—Wrong description mentioned before in Number 5 producing the wrong price, that is, material priced correctly as described but being described wrong produces incorrectness in the inventory.

8—Errors in arithmetical extensions and footings.

All of the above eight instances say nothing of differences between book values and inventory values because of wastage, or theft, or materials becoming obsolete, or loss from merchandise becoming shelf-worn, etc. Such losses are parts of the discrepancy between book and physical inventories and do not show themselves readily by merely counting inventory.

Sometimes the matter of merchandise in transit is an important item and should not be forgotten.

Pricing

In whatever way the inventory is taken, it will have to be priced, and this, of course, means that it must be priced from some adequate price record. This leads to the suggestion of the use of perpetual inventory record for the reasons to be outlined shortly.

Perpetual Inventory

We hear much about the perpetual inventory system these days. Many people feel that they cannot afford a perpetual inventory system. This may be so, but I am not so sure that this is always true. Some formality is necessary to obtain credits to the material accounts to go into work in process and finished goods accounts. If such formality is not maintained, there will be wastage of various kinds, and we must not forget the need to control this inventory matter in order to increase our turnover. The perpetual inventory system sometimes is a lot of work considering its benefits, but it is my experience that too often the perpetual inventory is condemned without giving it a chance to do all the numerous things it can do.

In its simpler form, it is a record of material in, material out, and balance on hand. Money values may be added, and the perpetual inventory carried in both quantity and values. This means, of course, more work, and the attempt to balance the money value on the perpetual inventory with the material control account leads to clerical difficulties, often times. Inventory credits must be had from somewhere to credit the material account and debit work in process or other accounts. A price record of some kind must be had to price requisitions, or bills of material, or customers' orders for such credit and in a great many cases can be made a part of the perpetual inventory. In such cases, we would carry quantities and values in the receipt column with no attempt to balance the values to the material control account. Such an arrangement combines the price record and the perpetual inventory record, and the chances are that it will be more accurate than a running price record. Too often the running price record is left to the office boy to keep with attendant delays and inconsistencies.

The perpetual inventory is a great time saver and speeds up business in other ways than in its inventory contact. It can serve as an assistant to a manufacturer and his purchasing agent in obtaining materials *when* wanted. The record may be expanded to include, then, the necessary information as to when to order merchandise and the record of when it has been ordered. This is exceedingly helpful in many instances. The system may be expanded to include the reservation of materials for production orders leaving an available balance unreserved. Such an arrangement, together with the purchase order system, prevents the condition arising of more than one customer's order being started in the factory with raw materials on hand sufficient for only one order.

These secondary uses of the perpetual inventory plan may be worth much more than the mere inventory portions alone. The record can tie into production management and purchasing so neatly that it will be of very great assistance to the management. I respectfully suggest that before the perpetual inventory plan is condemned that all of these various uses be seriously considered. such a record provides a place for the pricing of inventory in a convenient and logical way.

The question will arise as to the need for taking physical count of inventory when perpetual inventory is operated. Many people have suggested that if the perpetual inventory is carefully carried, then there would be no need for the bugbear of a physical count. However, most people feel that the physical count is necessary to check clerical errors as well as errors of fact that can creep into the most carefully operated plan.

If perpetual inventory is operated, I respectfully suggest that here be no usual, annual shut-down and that instead there be a weekly check-up of count. This can be effected by having some person other than the storekeeper or the stores clerk draw one-fifty-second of the perpetual inventory cards at random from the file, taking care that he does not draw a card which has already been counted during the fiscal year. With these cards in hand or a copy of the balances in hand, he will physically and personally count the quantities on hand corresponding. Any adjustment

necessary, both on the material account and the inventory record, should be made forthwith. In this way, during the course of the year the entire set of perpetual inventory cards will have been checked against the quantity on hand. Care must be taken that the inventory cards be up-to-date and that there be no differences of transactions in transit, that is material entered or withdrawn from the bin before it has been entered on the cards.

The objection will be raised at once that such a plan takes inventory of some items immediately before fiscal closing date and of other items nearly a year prior and that the general average will be six months old. This is true, but the answer to that objection is that the psychological effect of such a plan is so great that the number of errors and size of errors will be greatly reduced and book inventory can be taken without hesitation at the fiscal closing date. The storekeeper and the stores clerk do not know which particular items will be counted during the current week and are compelled to maintain their affairs in apple pie order at all times. The psychological effect is highly important. The high lights of this plan are the features of having someone other than the storekeeper or stores clerk do the counting, and that it be done at random.

Closely allied to the perpetual inventory plan is the use of bin tags where a running record of materials in, out, and balance is kept on a form physically attached to the merchandise bin itself. As a rule, I do not think much of bin tags. In the first place, such a record is a duplication of the perpetual inventory record if the latter is kept, and in the second place, it offers too great an opportunity for inaccuracy in most cases. It puts a clerical function upon storeroom men who ordinarily are not that type of employees. They very often have dirty fingers and broken pencils, which make for illegible records and may be so rushed at times that they neglect to make them at all. If it is thought wise to take the effort to keep a bin record, it is just as easy and more accurate to keep the same kind of a record as the perpetual inventory record with greater convenience all around.

The subject of minor materials suggests itself again. The minor materials should be handled and safeguarded in the storeroom like any other materials but need not be inventoried as explained before. This means that they need not be entered upon perpetual inventory records.

The physical operation of the storeroom is closely allied to inventory work as the inventory is merely a count at a given moment, and the transactions before and after have a bearing upon that work. As said before, it is highly important that there be some formality upon the withdrawals from the storeroom and the preparation of credits to material account. Such withdrawals should be made by requisition, or bill of material, or other written form because otherwise there will be losses of various kinds. The material on hand is merely cash converted into merchandise in the first step of revolving the assets. If the asset was in the form of cash, liberty bonds, or negotiable papers, the owner would have a guard posted with a machine gun and gas bombs to protect it. Just because the asset is in the form of inventory does not take away the need for some reasonable formality.

In pricing inventory, some concerns find it necessary to price materials into work-in-process at the current market price regardless of what the merchandise may have cost. Merchandise will, of course, be debited at cost to the material account, and if debited to work in process at market, there will be a loss or gain, depending on the fluctuations of the market. In such instances, it is recommended that an account in between the material account and work in process account be set up, entitled "Loss and Gain or Material," or some such distinctive name, which account can be debited with the drawings of material at cost and credited with the same materials at market price to pass into work in process account. Sometimes this arrangement is used only at inventory dates to bring forth the loss or gain and not have such loss or gain hidden in the material account itself. The balance of such account, of course, should be carried to the current profit and loss account.

Work-in-Process

The preceding remarks have been on raw material. The inventory of work in process is, of course, much more complicated to take in most cases, and consequently should be taken at a time when the work in process inventory is low. There are rare cases where the merchandise in the factory can be entirely finished by shutting off the starting of new production momentarily and in this way reduce the work in process inventory to zero. I would suggest that it will save clerical work in many cases if all of the work-in-process be manufactured up to a uniform point, or manufactured up to several uniform points, or in groups. This can be done in some instances if planned in advance and may not delay shipments to customers. It is of great assistance in pricing complicated inventories of work-in-process. Otherwise, there is a great need for rather elastic guess work. The job order cost system may make it somewhat easier, but not necessarily unless the work in process is low. In many instances, it is well worth the time and effort to plan the work to have the work-in-process inventory simplified in its condition of manufacturing status.

The compilation of the work-in-process inventory in standard cost accounting, of course, reveals the accumulated error in the standards. This again is subject to the same comment that if the inventory can be greatly lowered, it simplifies the revelation of these errors.

Finished Goods

The same idea, and system, and planning apply to a very large extent to the taking of inventory of finished goods. The use of perpetual inventory pricing, record, count, preparation, formality of handling, etc., are parallel to a very large extent to the raw material inventory.

Southeastern Superintendents To Meet

The annual meeting of the Southeastern Division of the American Pulp and Paper Mill Superintendents' Association will be held at the George-Vanderbilt Hotel, Asheville, N. C., on Friday and Saturday, October 3-4. The meetings will be divided between Asheville and Canton. The registration will be at the George-Vanderbilt Hotel, Asheville on Friday morning and members and their friends will be driven to the plant of the Champion Fibre Company, which is located at Canton, twenty miles from Asheville. The visitors will be the guests of the Champion Fibre Company for luncheon, after which a visit to the plant will be made, followed by a technical meeting at the Champion Y. M. C. A.

In the evening a dinner for members and friends will be given at the George Vanderbilt Hotel, Asheville. On Saturday morning a technical meeting will be held at the hotel. The afternoon will be devoted to golf or sightseeing and the sessions will be brought to a close with a banquet at the George Vanderbilt Hotel on Saturday evening.

D. J. Kerr of the Champion Fibre Company, Canton, is Chairman of the local committee, which consists of R. J. Sprang, W. M. Benzing, C. M. Trostel, H. A. Helder, Wm. S. Brooks, H. Williamson and J. S. Schumaker.

Cambridge Surface Pyrometers Catalog

The Cambridge Instrument Company, Inc., manufacturers of mechanical and electrical instruments of precision, of the Grand Central Terminal, New York, with factories at Ossining-on-Hudson, New York, have just issued a new catalog describing the Cambridge Surface Pyrometers. Sections of the booklet, which is profusely illustrated, are devoted to the Hand Model Surface Pyrometer, the Extension Model Surface Pyrometer, and the Mold Pyrometer.

In the paper industry, steam is an important item in the cost of production. With the Extension Surface Pyrometer overheated or water-logged dryer rolls are quickly located. The temperature of the various dryer rolls can be regulated to provide progressive drying which is now accepted as the proper procedure for obtaining a uniform product and also efficient operation.

Special German Paper Making Periodicals

REVIEWED BY CLARENCE J. WEST

In 1930 the Vereins der Zellstoff- und Papier-Chemiker und -Ingenieure held its annual convention in Goslar, June 25-27. As usual the two paper magazines, *Der Papier-Fabrikant* and *Wochenblatt für Papierfabrikation*, issued special numbers. The Fest- und Auslandsheft of Der Papier-Fabrikant consists of 98 pages of text and 194 pages of advertising; each signature is printed on a different kind of paper, eleven firms being represented. The Sondernummer of the Wochenblatt contains 124 pages of text and 160 pages of advertising and is printed on papers supplied by about twenty firms.

The technical portion of the Papier-Fabrikant contains the following articles: Hugo Lauber (pages 50-53) discusses the formation of gypsum in the tower liquor of the sulphite mill; he concludes that the presence of sulphate is due to the oxidation of the sulphite ion and not to an equilibrium between the sulphite and sulphate ions, since it is possible to prepare a sulphate-free tower liquor; the fact that the principal amount of the sulphate is found in the upper part of the tower is considered a further proof of this.

Friedrich Müller (pages 53-57) traces the development of paper engineering at the technical school at Darmstadt, while K. G. Jonas discusses the teaching of cellulose chemistry and L. von Roessler discusses that of paper testing. Hermann Suida (pages 103-105) briefly describes the section for chemistry and technology of cellulose and paper at the technical high school in Vienna, established in 1924. Paul Walter (pages 76-77) discusses the society of paper engineers at the technical high school at Darmstadt.

The usual article contributed by von Hössle (pages 58-76) deals this year with Bavarian paper history, illustrated with water marks.

Rassow, Voerster and Wolf (pages 77-103) present a 25-page article on the preparation of viscose from wood pulp; straw pulp is not suitable for the manufacture of viscose.

Arthur St. Klein reviews (pages 105-111) the work on the impregnation of wood in pulp digestion; this is one of the most important problems facing the paper industry today.

K. G. Jonas (pages 111-112) proposes to determine water in pulp and paper by drying at 65° in a current of air, which has been carefully dried by passing through sodium hydroxide, calcium chloride, sulphuric acid and phosphorus pentoxide.

P. Krais (pages 112-113) gives a list of chemical compounds with their boiling and melting points, which may be used as means of regulating and measuring heat.

Heinrich Kuhn (pages 113-117) shows, by tables and diagrams, the power requirements of the beater, working with different kinds of papers.

Hans Wrede (pages 118-119) shows that dextrose increases the ease of hydration of cellulose, thereby decreasing the work in the beater and giving a product with longer fibres; the use of three per cent of dextrose in the pulp improves the quality of the resulting pergamyn and imitation parchment; it also causes an increase in weight of the product of approximately three per cent, probably due to chemically bound water, which is not lost on the dryer.

Fritz Arledter (pages 130-131) writes on "old and new in paper sizing," with special reference to his own patents.

W. Schmid (pages 119-125) discusses several new types of barking drums; Erich Grigat (pages 125-129) describes appropriate drives for the pumps and other parts of the paper machine, while P. Weiske and K. Rupprecht (pages 133-138) write on calender drives.

The advertising section has a complete index in German with a table of the corresponding equivalents in English, French and Italian.

The Sonder-Festnummer of the Wochenblatt für Papierfabrikation opens with a description of the city of Goslar (pages 1-10). Friedr. von Hössle (pages 11-17) writes about the goldsmith and papermaker Johann Spielmann, who built a paper mill at Dartford in 1588-89 and Alfred Schulte (pages 17-23) gives a brief sketch of Johann Widmann of Heilbronn, who is stated to be the first German paper machine manufacturer.

A. Renfordt (pages 24-33) presents an illustrated discussion of the applications of steam turbines in the pulp and paper industries, while Wilhelm Stiel and Artur Haak (pages 33-43) discuss the recent developments of multiple motor drives for the paper machine and Arthur St. Klein (pages 43-45) gives a general discussion of the relation of the electric industry to the paper industry.

Reifegerste (pages 45-47) is of the opinion that bagasse is suitable for pulp production.

Walter Sembritzki (pages 47-48) gives some calculations on the power requirements per kg. of paper manufactured.

Pages 48-52 give a discussion (by a friend in the U. S.) of the boxboard industry in the United States.

Ralf Niethammer (pages 58-71) gives an extended discussion of the methods of handling pulp wood, illustrated with cuts of the apparatus used and curves showing relative costs. Mirus (pages 71-72) gives tables showing, as of 1927) the position of Germany in the paper industry of the world.

Erik Hägglund (pages 73-77) presents a chemical study of alpha- and beta-lignosulphonic acids; he concludes that the so-called beta-lignin is not present in pine wood as such; it is first formed on heating the pine wood with a solution of acid sulphite.

Paul Klemm (pages 78-80) discusses the relation between the weight and destiny of paper.

Friedrich Müller (pages 81-86) discusses the development of paper engineering at the technical school of Darmstadt (same article in the Papierfabrikant); Kirchner (pages 87-95) also writes on the same subject, with special reference to the men who have been active during the 25 years of the school's existence.

K. G. Jonas describes (pages 97-98) a method for determining the rosin and fat content of pulp.

Walter Brecht and Erich Schaun (pages 99-108) describe automatic control methods for wood grinders, giving microphotographs of the resulting pulps.

Fridolin Strauch (pages 108-117) illustrates, by means of curves, the relationship between the important properties of wood pulps.

Representative Northwestern Paper Men Speak

[FROM OUR REGULAR CORRESPONDENT]

PORTLAND, Ore., August 23, 1930—Irving T. Raw and C. W. Sherman of the St. Helens Pulp and Paper company, L. A. Linville of the Jaite Bag company, and A. E. Millington of the Fir-Tex Insulating Board company, and other industrial leaders of St. Helens, Oregon, were guests and spoke at the St. Helens Day celebration featured by the Portland Advertising club at their weekly luncheon meeting August 20. The affair paid tribute to industrial leaders of thriving St. Helens which has the highest industrial income per capita of any municipality in the state. Its major investments are in pulp and paper plants and allied interests.

Adirondack Lumbermen To Meet

[FROM OUR REGULAR CORRESPONDENT]

GLENS FALLS, N. Y., August 26, 1930—The annual outing of the Adirondack Lumbermen's Association will be held at Schroon Lake on September 6 and plans are now proceeding to make it one of the best in several years. A program of sports is being arranged and a number of prizes will be awarded to the various winners. A dinner is to be served early in the evening at the Brown Swan Club which will be followed by an entertainment from celebrated artists now spending the summer there. Guy Ralph, of Corinth, is chairman of the committee making arrangements for the outing.

NO LEAKS — NO STREAKS

with the

New Lodding Press Doctor

Self Aligning Flexible Blade

Feeds Out

No Waste

Installed on Approval

EACH BLADE GUARANTEED TO FIT—AND GIVE AT LEAST 6 MONTHS SERVICE

LODDING ENGINEERING CO.
WORCESTER, MASS.

Acceptance Financing

INTERNATIONAL ACCEPTANCE BANK, INC.

A Unit of THE MANHATTAN COMPANY

31 Pine Street New York

1864 **1930**

"EXCELSIOR" FELTS

for every grade of

PULP AND PAPER

We continue to maintain at the top the quality of Excelsior Felts, as we have done since we, as pioneers, made the first endless paper machine felts manufactured in America.

Seamless felts for fast running.
Satin Style felts for finish.
Special felts to meet every condition.
Send us your felt problems.

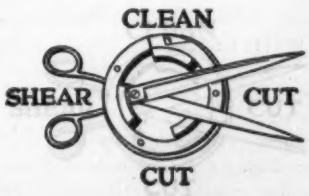
KNOX WOOLEN COMPANY
CAMDEN, MAINE

SOLD BY

BULKLEY, DUNTON & COMPANY

75-77 Duane St., N. Y., and direct

LANGSTON



For clean, square-edged, tightly wound rolls, Langston Slitters are unequalled. The famous Shear-Cut parts the paper sharply—*instead of crushing it.* Ask for catalog giving full details.

SAMUEL M. LANGSTON CO.
Camden, N. J.

SLITTERS

IMPORTS OF PAPER AND PAPER STOCK

NEW YORK, BOSTON, PHILADELPHIA AND OTHER PORTS

NEW YORK IMPORTS

WEEK ENDING AUGUST 23, 1930

SUMMARY

Cigarette paper .....2896 cs.
Wall paper .....2 bls., 50 cs.
Paper hangings .....1 cs.
News print .....38 bls., 5768 rolls
Printing paper .....96 cs.
Wrapping paper .....55 cs.
Packing paper .....16 cs.
Decalcomania paper .....11 cs.
Drawing paper .....5 cs.
Filter paper .....47 bls., 41 cs.
Colored paper .....14 bls., 35 cs.
Writing paper .....17 cs.
Metal paper .....26 cs.
Baryta coated paper .....35 cs.
Gold coated paper .....3 cs.
Surface coated paper .....30 cs.
Coated paper .....7 cs.
Tissue paper .....23 cs.
Bowl paper .....10 bls.
Gummed paper .....2 cs.
Card board .....265 cs.
Miscellaneous paper.....98 rolls, 10 bls., 139 cs.

CIGARETTE PAPER

British American Tobacco Co., Olympic, Southampton, 7 cs.
American Tobacco Co., La Bourdonnais, Bordeaux, 600 cs.
De Manduit Paper Corp., Schodack, St. Nazaire, 1828 cs.
American Tobacco Co., Schodack, Bordeaux, 300 cs.
P. J. Schweitzer, Pr. Fillmore, Marseilles, 148 cs.
British American Tobacco Co., Berengaria, Southampton, 7 cs.

WALL PAPER

F. J. Emmerich, A. Ballin, Hamburg, 4 cs.
Irving Trust Co., A. Ballin, Hamburg, 14 cs.
Graves Wallpaper Co., A. Ballin, Hamburg, 3 cs.
A. C. Rempert, Bremen, Bremen, 1 cs.
Kensington Wallpaper Co., Ohio Maru, Hamburg, 1 cs.
R. F. Downing & Co., Olympic, Southampton, 8 cs.
Heemsoth Basse & Co., Reliance, Hamburg, 2 cs.
F. J. Emmerich, New York, Hamburg, 2 cs., 2 bls.
Guaranty Trust Co., New York, Hamburg, 15 cs.

PAPER HANGINGS

J. Wanamaker, Lafayette, Havre, 1 cs.

NEWS PRINT

——, Karlsruhe, Bremen, 692 rolls.
Perkins, Goodwin & Co., A. Ballin, Hamburg, 670 rolls.
——, A. Ballin, Hamburg, 38 bls.
W. H. Bell, Markland, Liverpool, N. S., 3774 rolls.
Scripps Howard Supply Co., Drottningholm, Gothenburg, 249 rolls.
——, Larviksfjord, Oslo, 135 rolls.
——, Sagoporack, Kotka, 248 rolls.

PRINTING PAPER

E. Dietzgen & Co., Rotterdam, Rotterdam, 68 cs.
D. C. Andrews & Co., Berlin, Bremen, 4 cs.
Martin & Bechtold, A. Ballin, Hamburg, 19 cs.
Globe Shipping Co., Reliance, Hamburg, 5 cs.

WRAPPING PAPER

E. Dietzgen & Co., Rotterdam, Rotterdam, 52 cs.
H. Reeve Angel & Co., Inc., Belgenland, Antwerp, 3 cs.

PACKING PAPER

Atlantic F'd'g Co., A. Ballin, Hamburg, 16 cs.

DECALCOMANIA PAPER

C. W. Sellers, Bremen, Bremen, 11 cs.

DRAWING PAPER

H. Reeve Angel & Co., Inc., Minnekahda, London, 5 cs.

FILTER PAPER

C. Schleicher & Schull Co., A. Ballin, Hamburg, 25 cs.
H. Reeve Angel & Co., Inc., Minnekahda, London, 13 cs.
H. Reeve Angel & Co., Inc., Olympic, Southampton, 35 bls., 3 cs.
G. Leuders, La Bourdonnais, Bordeaux, 12 bls.

COLORED PAPER

Globe Shipping Co., Rotterdam, Rotterdam, 2 cs.
S. Gilbert, Berlin, Bremen, 30 cs.
F. L. Kramer & Co., Berlin, Bremen, 1 cs.
Quality Art Novelty Co., Berlin, Bremen, 14 bls.
Quality Art Novelty Co., Bremen, Bremen, 2 cs.

WRITING PAPER

Japan Paper Co., Rotterdam, Rotterdam, 4 cs.
Guibout Freres, Olympic, Southampton, 4 cs.
B. Altman & Co., Olympic, Southampton, 2 cs.
American Express Co., Indep. Hall, Havre, 6 cs.
Globe Shipping Co., Berengaria, Southampton, 1 cs

METAL PAPER

Hensel, Bruckman & Lorbacher, Karlsruhe, Bremen, 21 cs.
Taub, Hummel & Schnall, A. Ballin, Hamburg, 5 cs.

BARYTA COATED PAPER

Globe Shipping Co., Berlin, Bremen, 30 cs.
J. H. Schroeder Banking Corp., Berlin, Bremen, 5 cs.

GOLD COATED PAPER

Globe Shipping Co., Berlin, Bremen, 3 cs.

SURFACE COATED PAPER

Gevaert Co. of America, Belgenland, Antwerp, 30 cs.

COATED PAPER

Bank of America, New York, Hamburg, 7 cs.

TISSUE PAPER

F. C. Strype, A. Ballin, Hamburg, 2 cs.
Meadows, Wye & Co., Laconia, Liverpool, 3 cs.
Atlantic F'd'g Co., Ohio Maru, Hamburg, 18 cs.

BOWL PAPER

Hurley Johnson Corp., Baltic, Liverpool, 10 bls.

GUMMED PAPER

Heemsoth, Basse & Co., New York, Hamburg, 2 cs.

CARD BOARD

American Express Co., New York, Hamburg, 265 cs.

MISCELLANEOUS PAPER

Canson & Montgolfier, Lafayette, Havre, 12 cs.
Standard Products Corp., Lafayette, Havre, 142 cs.
——, Karlsruhe, Bremen, 6 cs.
The Borregaard Co., Inc., Drottningholm, Gothenburg, 97 rolls.
H. Reeve Angel & Co., Inc., Drottningholm, Gothenburg, 97 rolls.
H. Reeve Angel & Co., Inc., Drottningholm, Gothenburg, 10 bls.
R. F. Downing & Co., France, Havre, 2 cs.
T. N. Fairbanks, France, Havre, 2 cs.
G. E. Stechert, France, Havre, 9 cs.
Gershel & Newman, France, Havre, 9 cs.
Keller, Dorian Paper Co., France, Havre, 14 cs.
Japan Paper Co., Augustus, Genoa, 73 cs.
T. D. Downing & Co., New York, Hamburg, 4 cs.

RAGS, BAGGINGS, ETC.

International Trust Co., Schleswig Holstein, Antwerp, 149 bls. bagging.
Guaranty Trust Co., Schleswig Holstein, Antwerp, 45 bls. bagging.
1st National Bank, Schleswig, Holstein, Antwerp, 92 bls. flax waste.
Irving Trust Co., Schleswig Holstein, Antwerp, 92 bls. thread waste.
A. W. Fenton, Inc., Schleswig Holstein, Antwerp, 157 bls. rags.
E. J. Keller Co., Inc., Schleswig Holstein, ——, 36 bls. rags.
T. D. Downing & Co., Transylvania, Glasgow, 76 bls. bagging.
E. J. Keller Co., Inc., Rotterdam, ——, 39 bls. rags.
American Rag Trading Co., Rotterdam, Rotterdam, 106 bags picker waste.
E. Rosenbloom, A. Ballin, Hamburg, 8 bls. rags.
E. J. Keller Co., Inc., West Arrow, ——, 128 bls. rags.
Royal Manfg. Co., West Arrow, Rotterdam, 30 bls. cotton waste.
Amtorg Trading Corp., Sagoporack, Leningrad, 356 bls. rags.
M. Snedeker Corp., Laconia, Liverpool, 48 bls. paper stock.
Castle & Overton, Inc., Anaconda, Antwerp, 109 bls. rags.
E. Butterworth & Co., Inc., Anaconda, Antwerp, 40 bls. bagging.
Castle & Overton, Inc., San Jacinto, Havana, 33 bls. rags.
Banco Com'l Italiane Trust Co., Exarch, Genoa, 134 bls bagging.
Darmstadt, Scott & Courtney, Exarch, Genoa, 40 bls. bagging.
Darmstadt, Scott & Courtney, Schodack, Bordeaux, 37 bls. rags.
Banco Com'l Italiane Trust Co., Savoia, Genoa, 285 bls. bagging.
Marine Trust Co., Savoia, Genoa, 146 bls. bagging.
Globe Shipping Co., Reliance, Hamburg, 15 bls. rags.
Darmstadt, Scott & Courtney, Indep. Hall, Dunkirk, 30 bls. jute waste.
Castle & Overton, Inc., Clairton, Manchester, 30 bls. rags.
E. J. Keller Co., Inc., Coahoma, County, ——, 5 bls. rags.

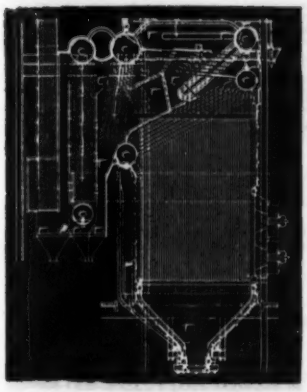
OLD ROPE

Brown Bros. & Co., Buenos Ayres, Vigo, 192 coils.
Brown Bros. & Co., Coahoma County, Rotterdam, 62 coils.

WOOD PULP

Castle & Overton, Inc., A. Ballin, Hamburg, 367 bls. wood pulp, 55 tons.
——, A. Ballin, Hamburg, 130 bls. wood pulp, 26 tons.
Atterbury Bros. Inc., United States, Oslo, 750 bls. wood pulp, 150 tons.
Johanson, Wales & Sparre, Inc., United States, Oslo, 210 bls. sulphite, 42 tons.
E. M. Sergeant & Co., Drottningholm, Gothenburg, 500 bls. wood pulp; 598 bls. kraft pulp.
Price & Pierce, Ltd., Drottningholm, Gothenburg, 250 bls. wood pulp.
——, Sagoporack, Kotka, 180 bls. sulphite, 30 tons.
D. M. Hicks, Inc., Ohio Maru, Hamburg, 128 bls. wood pulp, 25 tons.
Johanson, Wales & Spare, Inc., Ohio Maru, Hamburg, 228 bls. wood pulp, 45 tons.
Pagel, Horton & Co., Inc., Argosy, Domsjo, 1200 bls. sulphite, 200 tons.
Lagerloef Trading Co., Argosy, Kemi, 735 bls. sulphate, 122 tons.

(Continued on page 56)



BADENHAUSEN STEAM GENERATING UNITS

installed in some of the largest pulp and paper mills in the United States and Canada

MAXIMUM STEAM
AT
HIGHEST EFFICIENCY
WITH
LEAST CAPITAL INVESTMENT and OPERATING COSTS

Result:—Enormous savings in cost of pulp and paper produced.

BADENHAUSEN CORPORATION
General Offices and Works
CORNWELLS HEIGHTS (PHILA.), PA.

LOCKWOODS DIRECTORY of the PAPER AND ALLIED TRADES

A MINE OF USEFUL INFORMATION Is Now Ready

Entire contents classified under separate headings for the United States and Canada, alphabetically and geographically arranged by states.

1930 EDITION

City Addresses of Mills and Mill Supply Houses
Classified List of Paper Mill Products
Classified List of Pulp Mill Products
Coated Paper Manufacturers
Envelope Manufacturers
Glazed and Coated Paper Manufacturers
Idle Mills
Mill Officials
Pad Manufacturers
Paper Merchants
Paper Stock and Rag Dealers
Paper Bag Manufacturers
Paper Box Manufacturers
Paper, Wood Pulp and Chemical Fiber Mills of the United States, Canada, Cuba, Mexico and South America
Paper Specialties Manufacturers
Papeterie Manufacturers
Prepared Roofing Manufacturers
Rags and Paper Stock Consumed by the Paper Mills
Stationers in United States, Porto Rico, Canada, Cuba, Hawaiian Islands and the Philippine Islands
Statistical Table of Mills
Tablet Manufacturers
Tag Manufacturers
Toilet Paper Manufacturers
Trade Associations
Twine Manufacturers
Vegetable Parchment Manufacturers
Wall Paper Printers
Watermarks and Brands
Waxed Paper Manufacturers

Price $7.50

LOCKWOOD TRADE JOURNAL CO.
10 East 39 Street ~ New York N.Y.

Union Screen Plate Company
Fitchburg, Mass., U. S. A. Lennoxville, P. Q., Canada

UNION BRONZE

SCREEN PLATES FOR FLAT SCREENS
6 SLOTS—5 SLOTS—4½ SLOTS—4 SLOTS—PER INCH

Old Plates Reclosed and Re-cut to Accurate Gauge
Rolled Phosphor Bronze and Copper Plates for Rotary Screens
Sole Manufacturers of the Union Witham Screen Plate Vat and Fastener

Imports of Paper and Paper Stock

(Continued from page 54)

Lagerloef Trading Co., Argosy, Rauma, 320 bls. sulphite, 52 tons.
Lagerloef Trading Co., Argosy, Helsingfors, 31 bls. sulphite, 6 tons.
——, New York, Hamburg, 260 bls. wood pulp, 52 tons.
Castle & Overton, Inc., New York, Hamburg, 2939 bls. wood pulp, 438 tons.
M. Gottesman & Co., Inc., Coahoma County, Rotterdam, 1150 bls. sulphite, 115 tons.
E. M. Sergeant & Co., Kelkheim, Hernosand, 1050 bls. sulphite, 175 tons.
J. Andersen & Co., Kelkheim, Hernosand, 3000 bls. sulphite, 500 tons.
——, Kelkheim, Hernosand, 4500 bls. sulphite, 750 tons.
——, Kelkheim, Hernosand, 2700 bls. sulphate, 450 tons.
Bulkley, Dunton & Co., Kelkheim, ——, 8330 bls. wood pulp, 1530 tons.
Stora, Kopperberg Corp., Belos, Skutskar, 2275 bls. wood pulp, 446 tons.
Pagel, Horton & Co., Inc., Belos, Gefle, 750 bls. wood pulp, 76 tons.
Johanson, Wales & Sparre, Inc., Belos, Essvik, 150 bls. sulphite, 25 tons
Johanson, Wales & Sparre, Inc., Belos, Wifstavarf, 1000 bls. sulphite, 202 tons.
Perkins, Goodwin & Co., Belos, Wifstavarf, 2150 bls. sulphite.
E. M. Sergeant & Co., Belos, Hernosand, 450 bls. sulphite, 75 tons.
J. Andersen & Co., Belos, Hernosand, 3000 bls. sulphite, 500 tons.
Bulkley, Dunton & Co., Belos, ——, 15330 bls. wood pulp, 2918 tons.

PULPWOOD

——, Sedgepool, Archangel, 2732 cords.

WOOD PULP BOARDS

H. Fuchs & Son, A. Ballin, Hamburg, 253 pkgs.

WOOD FLOUR

State Chemical Co., Rotterdam, Rotterdam, 400 bags.
A. Hurst & Co., Drottningholm, Gothenburg, 360 bags.
B. L. Soberski, Larviksfjord, Frederickstad, 2250 bags.
State Chemical Co., Coahoma County, Rotterdam, 567 bags, 33560 kilos.

NEW ORLEANS IMPORTS

WEEK ENDING AUGUST 23, 1930

E. J. Keller Co., Inc., Davenport, ——, 189 bls. rags.

BALTIMORE IMPORTS

WEEK ENDING AUGUST 23, 1930

Pagel, Horton & Co., Inc., Sagoporack, Munksund, 3000 bls. sulphate, 500 tons.
——, Sagoporack, Kotka, 2448 bls. sulphate, 472 tons.
Lagerloef Trading Co., Sagoporack, Kotka, 1360 bls. sulphate, 227 tons.
Lagerloef Trading Co., Sagoporack, Helsingfors, 155 bls. sulphite, 26 tons.
Virginia Paper Co., Sagoporack, Helsingfors, 83 rolls news print.
Castle & Overton, Inc., Anaconda, Antwerp, 215 bls. rags.
Katzenstein & Keene, Inc., Schodack, St. Nazaire, 551 bls. rags.
Congoleum Nairn Co., Schodack, St. Nazaire, 273 bls. rags.
Congoleum Nairn Co., Indep. Hall, Havre, 198 bls. rags.
J. Horne, Indep. Hall, Havre, 6 cs. writing paper.
American Express Co., Indep. Hall, Havre, 3 cs. writing paper.
J. Andersen & Co., Kelkheim, Hernosand, 300 bls. sulphite, 50 tons.
Pagel, Horton & Co., Inc., Kelkheim, Hernosand, 600 bls. sulphite, 100 tons.
M. Gottesman & Co., Inc., Kelkheim, Iggesund, 1325 bls. sulphate, 265 tons; 4250 bls. sulphite, 850 tons.
Bulkley, Dunton & Co., Kelkheim, ——, 3250 bls. wood pulp, 600 tons.

BOSTON IMPORTS

WEEK ENDING AUGUST 23, 1930

——, Argosy, Hernosand, 1260 bls. sulphite, 210 tons.
——, Argosy, Hernosand, 600 bls. sulphate, 100 tons.
Irving Trust Co., Argosy, Hernosand, 3000 bls. sulphate, 500 tons.
J. Andersen & Co., Argosy, Hernosand, 1050 bls. sulphite, 175 tons.
Pagel, Horton & Co., Inc., Argosy, Domsjo, 1800 bls. sulphite, 300 tons.
Perkins, Goodwin & Co., Argosy, Obbola, 4375 bls. sulphate, 625 tons.
Lagerloef Trading Co., Argosy, Kemi, 1479 bls. sulphate, 246 tons.
Lagerloef Trading Co., Argosy, Rauma, 800 bls. sulphite, 132 tons.
Lagerloef Trading Co., Argosy, Helsingfors, 169 bls. sulphite, 25 tons.
Atkinson, Haserick & Co., Pr. Fillmore, Genoa, 5 cs. paper.
Brown Bros. & Co., Brazilian Prince, B. Ayres, 334 bags casein.

PORTLAND IMPORTS

WEEK ENDING AUGUST 23, 1930

J. Andersen & Co., Argosy, Hernosand, 3000 bls. sulphate, 575 tons.
——, Argosy, Kalix, 2500 bls. dry pulp, 500 tons.
Lagerloef Trading Co., Argosy, Kemi, 7350 bls. dry pulp, 1227 tons.
Lagerloef Trading Co., Argosy, Rauma, 2418 bls. dry pulp, 425 tons.
Lagerloef Trading Co., Argosy, Helsingfors, 2012 bls. dry pulp, 307 tons.

NORFOLK IMPORTS

WEEK ENDING AUGUST 23, 1930

New York Trust Co., West Arrow, Antwerp, 171 bls. bagging.
Lagerloef Trading Co., Blankaholm, Viborg, 9207 bls. sulphite; 2039 bls. sulphate.
Lagerloef Trading Co., Blankaholm, Kotka, 130 bls. pulp boards; 762 bls. sulphate.
W. M. Stone Co., Blankaholm, Kotka, 299 rolls news print.
Darmstadt, Scott & Courtney, Anaconda, Antwerp, 162 bls. bagging.

PHILADELPHIA IMPORTS

WEEK ENDING AUGUST 23, 1930

E. J. Keller Co., Inc., West Arrow, ——, 66 bls. rags..
Lagerloef Trading Co., Blankaholm, Viborg, 7777 bls. sulphite; 170 bls. sulphate.
J. W. Hampton, Jr., Inc., Blankaholm, Kotka, 102 rolls news print.
Lagerloef Trading Co., Blankaholm, Kotka, 184 bls. pulp boards.
Lagerloef Trading Co., Blankaholm, Helsingfors, 299 bls sulphite.
Lagerloef Trading Co., Blankaholm, Kotka, 127 bls. sulphate; 150 bls. sulphite.
J. Andersen & Co., Sagoporack, Springsviken, 1500 bls. sulphate, 285 tons.
E. M. Sergeant & Co., Sagoporack, Utansjo, 1800 bls. sulphite, 300 tons.
Price & Pierce, Ltd., Sagoporack, Orviken, 3300 bls. wood pulp, 558 tons.
Pagel, Horton & Co., Inc., Sagoporack, Munksund, 6000 bls. sulphate, 1000 tons.
Lagerloef Trading Co., Sagoporack, Kotka, 127 bls. sulphate, 25 tons.
Lagerloef Trading Co., Sagoporack, Kemi, Sulphate pulp, 734 tons.
Amtorg Trading Co., Sagoporack, Leningrad, 350 bls. rags.
Int'l Trust Co., Exarch, Marseilles, 99 bls. old rope.
P.Berlowitz, Schodack, St. Nazaire, 270 bls. rags.
D. I. Murphy, Schodack, St. Nazaire, 91 bls. rags.
National Vulcanized Fibre Co., Schodack, St. Nazaire, 205 bls. rags.
Irving Trust Co., Schodack, St. Nazaire, 180 bls. rags.
H. G. Lishtenstein, Schodack, Bordeaux, 208 bls. rags.
J. A. Steer & Co., Schodack, Bordeaux, 110 bls rags.
Katzenstein & Keene, Inc., Schodack, Bordeaux, 132 bls. rags.
E. J. Keller Co., Inc., Schodack, ——, 77 bls rags.
F. Weber & Co., Savoia, Genoa, 15 cs. paper
Liberty National Bank & Trust Co., Savoia, Naples, 52 bls. rags.

Will Pueblo Get A Pulpwood Mill?

DENVER, Col., August 23, 1930—When the International Paper Company bid in the two million cords of pulpwood, the wood located in the San Juan and Rio Grande forests of Colorado, it was rumored that the company would establish pulpwood mills at Alamosa and Salida, Colorado, and some went so far as to mention various kinds of paper that would be produced. Now the rumor has settled upon Pueblo, Colorado as the logical location because of its ready access to coal and natural gas, railroad facilities and an abundance of water. Thus far no official announcement has been made by the Chamber of Commerce or any one connected with the International.

Remote Manual Control

The Brown Instrument Company, Wayne and Roberts Avenues, Philadelphia, Pa., has just issued Bulletin 7520, which describes and discusses the de Florez System of Remote Manual Control, handled exclusively by The Brown Instrument Company.

Operating through an application of Selsyn Motors, the de Florez System of Remote Manual Control is extremely flexible and sensitive. The operator can retain the "personal touch" and actual "feel" of the mechanism being operated, so essential to best results in many cases, regardless of the distance separating the transmitting and receiving mechanisms.

Copies of this bulletin will be forwarded free upon request.

Takes Over Sale of Barking Drums

The Horton Steel Works, Limited of Bridgeburg, Ontario, has acquired from the Canadian Barking Drum Company, Limited, the rights to sell and service, as well as to manufacture, U-BAR barking drums and accessory equipment. Formerly, the Horton Steel Works, Limited, handled only the fabrication of the equipment.

The U-BAR drum, which is made in both chain suspension and trunnion types, has become popular since its introduction in 1915. More than 550 installations have been made in twelve different countries, including Canada, Newfoundland, England, United States, Mexico, Japan, Norway, Sweden, Finland, Russia, France and Holland.

Arthur D. Little, Inc.

Chemists and Engineers to the Pulp and Paper Industry for over Forty Years

Laboratories and Experimental Mill

30 CHARLES RIVER ROAD, CAMBRIDGE, MASS.

Hardy S. Ferguson & Co.

Consulting Engineers

200 Fifth Avenue, New York City

Hardy S. Ferguson..... Member A.S.C.E., A.S.M.E., E.I.C.
Moses H. Teaze..... Member A.S.M.E., E.I.C.
J. Wallace Tower..... Member A.S.C.E., A.S.M.E.

Consultation, reports, valuations, and complete designs and engineering supervision for the construction and equipment of

Pulp and Paper Mills and other Industrial Plants.
Steam and Hydro-electric Power Plants.
Dams and other Hydraulic Structures.

GEORGE F. HARDY

Consulting Engineer

305-309 Broadway, New York City, N. Y.

Member—Am. Soc. C.E.—Am Soc. M.E.—Eng. Inst. Can.

Consultation	Paper and Pulp Mills
Reports	Hydro-Electric and
Valuations	Steam Power Plants
Estimates	Plans and Specifications

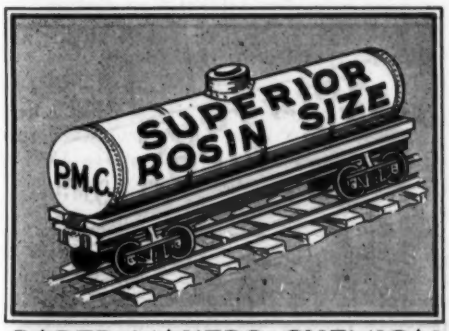
V. D. SIMONS

INDUSTRIAL ENGINEER

Pulp and Paper Mills, Hydro-Electric and Steam Power Plants, Electrification Paper Mill Properties.

435 No. Michigan Ave.

CHICAGO, ILL.



20 plants to serve You

PAPER MAKERS CHEMICAL CORP.
Kalamazoo, Michigan

H. S. TAYLOR

Consulting Engineer

Member Am. Soc. C. E.—Member Am. Soc. M. E.
Member Eng. Inst., Can.—Member A. I. E. E.

PULP, PAPER, AND FIBRE MILLS
HYDRO - ELECTRIC AND STEAM POWER PLANTS
PLANS-SPECIFICATIONS-EVALUATIONS
REPORTS - CONSULTATIONS

Jefferson St. Arcade, Dayton, O. — Guarantee Bldg., Montreal, P. Q.

The Leshner Paper Stock Co.

wishes to announce that a change has been made in the corporate name to

THE LESHNER CORPORATION

and request that all communication hereafter be addressed accordingly.
There is no change in directorate nor capitalization.

HAMILTON, OHIO

New York Market Review

Office of the PAPER TRADE JOURNAL,
Wednesday, August 27, 1930.

Conditions in the local paper market during the past week were fairly satisfactory for the time of year. While demand for the various standard grades was light there were numerous inquiries for future requirements and the outlook for the closing months of the year is promising. Sales forces of the leading paper organizations are planning a strenuous campaign for orders and will resume activities after Labor Day.

Production of news print paper is being maintained in sufficient volume to take care of current needs. Although demand has fallen off somewhat, due to seasonal causes, trading from now on to the end of the year should become more lively. Shipments have been going forward of late in satisfactory volume and stocks at the mills are not unduly excessive. There have been no further developments in the price situation.

Demand for the various grades of paper board has been fairly persistent. While prices remain unaltered, the expectation is expressed, in some quarters, that the market will become firmer in the near future. The fine paper market continues to exhibit a strong undertone. Tissues are proceeding at a steady pace. Some improvement was noticed in the coarse paper market and wrapping paper is in better request than of late.

Mechanical Pulp

The ground wood market was moderately active. Despite the recent long drought, offerings are large enough to take care of current needs. Contract shipments are going forward to the paper mills in a normal manner for the season. Prices of practically all grades of domestic and imported mechanical pulp remain unchanged and reports of shading are infrequent.

Chemical Pulp

Although the chemical pulp market continues rather quiet, the prevailing conditions are mainly due to the usual midsummer lull. Supplies have been moving into consumption at a fairly steady pace. There are a number of inquiries around at present for future needs. Prices are holding to formerly quoted levels, in most instances.

Old Rope and Bagging

The position of the old rope market is practically unchanged. Demand for both imported and domestic old manila rope is somewhat restricted. Small mixed rope is fairly steady. No radical price changes have been recorded. The bagging market is exhibiting a strong tendency. Both scrap and gunny bagging are in excellent request. Prices remain unaltered.

Rags

Steadiness prevails in the domestic rag market despite the general business depression. Demand for cotton cuttings is fairly satisfactory. Roofing grades are in improved request. Mixed rags are moving in routine volume. Domestic rag prices are generally steady and unchanged. There has been no change in the imported rag situation and prices abroad are still considered high.

Waste Paper

Paper mill interest in the waste paper market was less evident during the past week, probably due to the close proximity of the Labor Day holidays. Demand for the higher grades of paper stock, however, is holding up very well. The lower grades were rather easy, but will probably become firmer in the near future. Prices are practically unchanged.

Twine

Business in the local twine market is being maintained in a normal manner for the season. More lively trading is anticipated, in most quarters, during the last four months of the year. With the exception of extra desirable orders which have resulted in keen competition, prices are holding to schedule, and no serious concessions have been reported.

Sauquoit Paper Co. Resumes Work

SAUQUOIT, N. Y., August 26, 1930.—Full time operations were resumed this week at the plant of the Sauquoit Paper Company, following a cessation of activities resulting from differences with workers. The announcement last week by the firm of a new arrangement for determining wages caused dissension among the 75 girl workers and it was decided to close the plant to permit a satisfactory settlement. Although the shutdown started rumors of an impending strike, it was announced this week that all employees had returned to work with everything running satisfactorily. Carl L. Spofford, president, said that the curtailment was caused by a misunderstanding of the wage schedule.

Centrifugal Pump Bulletin

Goulds Pumps, Inc., Seneca Falls, New York, are now distributing the second of their series of Centrifugal Pump Selection Chart Bulletins. This second book covers multistage pumps for capacities up to 2000 G. P. M. and heads up to 2400 feet. As with the first book, a comprehensive group of charts enables the prospective pump user to quickly and easily determine just what pump is best suited to his individual requirements. Complete description, including cross sections, bearing details and dimensions for each pump follow. Copies may be secured on request to the manufacturer at the home office or any of the branches or representatives.

New Walworth Catalog Issued

Several new features are incorporated in the new catalog on valves and fittings just published by the Walworth Company, of Boston, Mass. Special prominence is given to brass valves and quality products of a more distinctive type. On all valves recommended for oil, water and gas service, the ratings are given. At the beginning of the steel section is shown a steel valve and fittings recommendation chart, covering pressures, temperatures and trim materials for various classes of service. The color scheme of the book, the binding and the typography, are all of a high standard of quality.

TAPPI Meeting Notes

At the Presque Isle outing of the TAPPI Erie Convention, provision will be made for bathing. It is suggested that those interested bring along bathing suits, and the trip to Port Dover, Ontario, which will be made on Wednesday evening, September 3, will necessitate the wearing of heavy wraps.

FRANK P. LYDEN
Paper and Pulp Mill Consultant
Specialist on Bond, Waxing, Roto., Kraft and Ground Wood Specialties
INVESTIGATIONS—CONFIDENTIAL REPORTS
Room 1427, Knickerbocker Bldg., 152 W. 42nd St., New York, N. Y.
Telephone Wisconsin 2954

Appleton
Felts and Jackets

RYTHER AND PRINGLE COMPANY CARTHAGE N.Y.
CHIP SCREENS · CHIP BREAKERS · CHIP SEPARATORS · CONVEYORS · AGITATORS
PULP SHREDDERS · SAW SLASHERS · RELIEF GAS COOLERS · LOG HAULS · SPLITTERS
CANADIAN INGERSOLL-RAND CO. LTD. 10 Phillips Square, MONTREAL, CANADA

FREDERICK PUMPS
The Frederick Iron & Steel Co., Frederick, Maryland

Perforated Metal Screens
for every purpose
also elevator buckets of all kinds; chutes; hoppers; stacks and tanks.
MITCO Products — Interlocked Steel Grating; Shur-Site Stair Treads; Armorgrids.
HENDRICK MANUFACTURING CO.
50 Dundaff St., Carbondale, Pa.
New York: 30 Church St. Pittsburgh: Koppers Bldg.

STEBBINS
IF IT'S A LINING JOB—
ENGINEERING CALL ON STEBBINS & MFG. CO.
SEATTLE, WASH. WATERTOWN, N.Y.

FOURDRINIER CYLINDER, WASHER WIRE
FOR SERVICE
GREEN BAY WIRE WORKS
GREEN BAY, WISC.

JOHN WALDRON CORPORATION
Paper Converting Machinery Builders Since 1827
Main Office and Works—NEW BRUNSWICK, N. J.
CHICAGO NEW YORK

PAPER TESTS
In Accord with T.A.P.P.I Standard Methods
Oils — Paper — Pulp Water — Microphotograph
Electrical, Mechanical, Physical, Chemical and Photometric Tests
ELECTRICAL TESTING LABORATORIES
80th St. & East End Ave., New York

MID-WEST HI-SPEED BEATERS
MID-WEST LIGHTER STANDS
MID-WEST BANDLESS ROLLS
WRITE FOR INFORMATION
THE MID-WEST MACHINE COMPANY
DAYTON, OHIO

SKID-EM-ON-TRUCKS
A COMBINED LOADER-CARRIER-UNLOADER THAT WILL SAVE YOU MONEY AND PREVENT ACCIDENTS
435 SOUTH SENATE AVE. INDIANAPOLIS IND.
CENTRAL MACHINE WORKS

Wood and Tile
TANKS
of every description by your industry's foremost tank builder. Why not call in a specialist?
Kalamazoo Tank & Silo Co.
Kalamazoo Michigan

Your Card in This Space Will Bring Results

FIDALGO DRYING SYSTEMS, INC.
122 EAST 42ND ST. NEW YORK CITY
FIDALGO DRYER FOR PULP
DRYAD BOARD DRYER
FIDALGO SHREDDER
PEHRSON ROTARY DRYER
CONSISTENCY REGULATOR
BEADLE METERING SYSTEM
FELT CONDITIONER — MICROSCOPE

DAYTON BEATERS
HIGH SPEED
The Dayton Beater & Hoist Co., Dayton, Ohio
MANSFIELD, BOLTON & KENT, F. H. GODFREY

Miscellaneous Markets

Office of the PAPER TRADE JOURNAL,
Wednesday, August 27, 1930.

BLANC FIXE.—The position of the blanc fixe market is practically unchanged. Demand for both the pulp and the powder is fairly active. The pulp is quoted at from $42.50 to $45.00 per ton, in bulk, while the powder is selling at from 3¼ cents to 4½ cents per pound, in barrels, at works.

BLEACHING POWDER.—Trading in the bleaching powder market was only moderately active. The contract movement was fairly satisfactory. Prices are generally holding to previously quoted levels. Bleaching powder is offered at from $2.00 to $2.35 per 100 pounds, in drums, at works.

CASEIN.—Demand for casein was light. Domestic standard ground is still quoted at 13½ cents and finely ground at 15 cents per pound. Argentine standard ground is selling at 13½ cents and finely ground at 14½ cents per pound, all in bags, car lot quantities.

CAUSTIC SODA.—Some improvement was noticed in the demand for caustic soda. The contract movement is well up to average. Solid caustic soda is quoted at from $2.90 to $2.95, while the flake and the ground are selling at from $3.30 to $3.35 per 100 pounds, in large drums, at works.

CHINA CLAY.—Steadiness prevails in the china clay market. Supplies are moving into consumption in good volume. Prices remain unchanged. Imported china clay is quoted at from $15 to $25 per ton, ship side, while domestic paper making clay is selling at from $8 to $13 per ton, at mine.

CHLORINE.—The chlorine market was fairly active. Shipments against contract were well maintained. Prices are holding to previously recorded levels. Chlorine is quoted at from $2.40 to $2.45 per 100 pounds, in tanks, or multi-unit cars, in ton lots, or over, at works.

ROSIN.—Conditions in the rosin market have improved and prices are firmer. The grades of gum rosin used in the paper mills are now quoted at from $5.80 to $5.85 per 280 pounds, in barrels, at works. Wood rosin is selling at $4.10 per 280 pounds, in barrels, at southern shipping points.

SALT CAKE.—The salt cake market was rather quiet, due to general business conditions. Contract shipments are moving in a seasonal manner. Salt cake is still quoted at from $22 to $25 per ton, while chrome salt cake is selling at from $20 to $21 per ton, in bulk, at works.

SODA ASH.—Supplies of soda ash are going forward to the paper mills in fairly heavy volume. Demand is gradually improving. Prices are holding to schedule. Contract quotations on soda ash, in car lots, at works, are as follows: in bags, $1.32½, and in barrels, $1.55.

STARCH.—The starch market is exhibiting a strong undertone. Shipments against contract are going forward to the paper mills in seasonal volume. Prices remain unchanged. Special paper making starch is quoted at $3.77, in bags, and at $4.04 per 100 pounds, in barrels.

SULPHATE OF ALUMINA.—Most of the business transacted in the sulphate of alumina market was routine. The contract movement was normal. Prices are unchanged. Commercial grades are quoted at from $1.40 to $1.55, and iron free at from $1.90 to $2.05 per 100 pounds, in barrels, at works.

SULPHUR.—The sulphur market is displaying a steady trend. Sulphur is still quoted at $18 per ton, at mine, on orders of 1,000 tons, or over, on yearly contracts, and at $20 per ton for any smaller quantity over that period. On spot and nearby car loads the quotation is $21 per ton.

TALC.—Contract shipments of talc are going forward to the paper mills in a routine manner. Prices are holding to formerly quoted levels. Domestic talc is quoted at from $16 to $18 per ton, in bulk, at eastern mines, while imported talc is selling at from $18 to $20 per ton, in bags, ship side.

Market Quotations

Paper
(F. o. b. Mill)

Ledgers	11.00	@	38.00
Bonds	9.00	@	53.25
Writings—			
Extra Superfine	14.00	@	32.00
Superfine	14.00	@	32.00
Tub sized	10.00	@	15.00
Engine sized	8.00	@	11.00
Book, Cased—			
S. & S. C.	6.00	@	7.50
M. F.	5.75	@	7.00
Coated and Enamel	7.50	@	12.00
Lithograph	7.50	@	12.00
Tissues—Per Ream—			
White No. 1	.75	@	1.00
Anti-Tarnish	1.35	@	1.90
Colored	1.00	@	2.00
White No. 2	.75	@	.80
Kraft	1.00	@	1.10
Manila	.75	@	.80
Kraft—			
No. 1 Domestic	5.75	@	6.25
No. 2 Domestic	3.75	@	5.00
Southern	3.75	@	4.75
Imported	6.50	@	7.00
Manila—			
No. 1 Jute	9.00	@	9.25
No. 2 Jute	7.75	@	8.50
No. 1 Wood	4.75	@	5.25
No. 2 Wood	4.00	@	4.50
Butchers	3.75	@	4.25
Fibre Papers—			
No. 1 Fibre	5.00	@	5.50
No. 2 Fibre	4.75	@	5.25
Common Bogus	2.75	@	3.00
Screenings	3.00	@	3.25
Card Middles	4.00	@	5.00
Glassine—			
Bleached, basis 25 lbs.	13.00	@	16.00
Bleached, basis 20 lbs.	15.00	@	16.00

(Delivered New York)

News, per ton—			
Rolls, contract	62.00	@	—
Rolls, spot	62.00	@	—
Sheets	67.00	@	—
Side Runs	47.00	@	52.00
Boards—per ton—			
News	37.50	@	—
Straw	44.00	@	—
Chip	35.00	@	—
Binders' Boards	65.00	@	70.00
100 Test Jute Liner	37.50	@	40.00
85 Test Jute Liner	47.50	@	50.00
Sgl. Mla. Ll. Chip	47.50	@	50.00
Wood Pulp Boards	75.00	@	80.00

(F. o. b. Mill)

Mechanical Pulp
(On Dock)

No. 1 Imported—			
Moist	28.00	@	30.00
Dry	30.00	@	32.00

(F. o. b. Mill)

No. 1 Domestic	26.00	@	30.00

Chemical Pulp
(On Dock, Atlantic Ports)

Sulphite (Imported)—			
Bleached	3.00	@	4.25
Easy Bleaching	2.60	@	2.80
No. 1 strong unbleached	2.30	@	2.65
Mitscherlich unbleached	2.40	@	2.85
No. 2 strong unbleached	2.20	@	2.35
No. 1 Kraft	1.65	@	2.15
No. 2 Kraft	1.55	@	1.65
Sulphate—			
Bleached	3.40	@	3.85

(F. o. b. Pulp Mill)

Sulphite (Domestic)—			
Bleached	2.65	@	4.75
Easy Bleaching Sulphite	2.55	@	2.75
News Sulphite	2.35	@	2.60
Mitscherlich	2.75	@	3.25
Kraft (Domestic)	2.10	@	3.30
Soda Bleached	2.90	@	3.20

Domestic Rags
New Rags
(Prices to Mill f. o. b N. Y.)

Shirt Cuttings—			
New White, No. 1	8.75	@	9.25
New White, No. 2	7.25	@	7.75
Silesias No. 1	6.75	@	7.00
New Unbleached	9.50	@	10.00
New Blue Prints	5.25	@	5.50
New Soft Blacks	5.25	@	5.75
Blue Overall	6.75	@	7.25
Washables	4.25	@	4.75
Fancy	4.75	@	5.25
Mixed Khaki Cuttings	4.75	@	5.25
Pink Corset Cuttings	8.00	@	8.50
O. D. Khaki Cuttings	5.15	@	5.75
Men's Corduroy	3.75	@	4.25
New Mixed Blacks	3.50	@	3.75

Old Rags

White, No. 1—			
Repacked	5.50	@	6.00
Miscellaneous	4.50	@	5.00
White, No. 2—			
Repacked	3.00	@	3.50
Miscellaneous	2.50	@	2.75
St. Soiled, White	2.00	@	2.15
Thirds and Blues—			
Repacked	2.25	@	2.50
Miscellaneous	1.75	@	2.00
Black Stockings	3.25	@	3.75
Roofing Rags—			
Cloth Strippings	1.50	@	1.60
No. 1	1.50	@	1.60
No. 2	1.15	@	1.25
No. 3	1.10	@	1.20
No. 4	1.00	@	1.10
No. 5A	.90	@	1.05

Foreign Rags
New Rags

New Dark Cuttings	2.50	@	3.00
New Mixed Cuttings	2.25	@	2.75
New Light Silesias	6.75	@	7.00
Light Flannelettes	6.75	@	7.25
Unbleached Cuttings	9.00	@	9.50
New White Cuttings	9.00	@	9.50
New Light Oxfords	7.00	@	7.50
New Light Prints	5.00	@	5.50

Old Rags

No. 1 White Linens	7.25	@	8.00
No. 2 White Linens	5.75	@	6.75
No. 3 White Linens	4.75	@	5.25
No. 4 White Linens	3.00	@	3.50
No. 1 White Cotton	5.50	@	6.25
No. 2 White Cotton	4.50	@	5.00
No. 3 White Cotton	3.00	@	4.00
No. 4 White Cotton	1.75	@	2.10
Extra Light Prints	2.75	@	3.00
Ord. Light Prints	2.15	@	2.40
Med. Light Prints	1.80	@	2.00
Dutch Blue Cottons	2.15	@	2.30
French Blue Linens	2.65	@	2.75
German Blue Linens	2.30	@	2.50
German Blue Cottons	1.90	@	2.00
Checks and Blues	1.75	@	1.90
Lindsay Garments	1.30	@	1.40
Dark Cottons	1.00	@	1.10
Old Shopperies	.90	@	1.00
New Shopperies	.95	@	1.05
French Blues	1.95	@	2.05

Old Rope and Bagging
(Prices to Mill f. o.b. N. Y.)

Gunny No. 1—			
Foreign	1.60	@	1.70
Domestic	1.65	@	1.75
Wool Tares, light	1.60	@	1.65
Wool Tares, Heavy	1.60	@	1.70
Bright Bagging	1.60	@	1.70
Small Mixed Rope	1.25	@	1.40
Manila Rope—			
Foreign	3.00	@	3.25
Domestic	3.50	@	3.75
New Burlap Cut	2.25	@	2.50
Hessian Jute Threads—			
Foreign	3.50	@	4.00
Domestic	3.25	@	3.50

Old Waste Papers
(F. o. b. New York)

Shavings—			
Hard, white, No. 1	3.00	@	3.25
Hard, white, No. 2	2.40	@	2.55
Soft, white, No. 1	2.65	@	2.75
White envelope cuttings	2.90	@	3.10
Flat Stock—			
Stitchless	1.30	@	1.40
Overissue Mag.	1.30	@	1.40
Solid Flat Book	1.20	@	1.30
Crumpled No. 1	.80	@	.90
Solid Book Ledger	2.00	@	2.10
Ledger Stock	1.30	@	1.40
New B. B. Chips	.35	@	.45
Manilas—			
New Env. Cut.	2.40	@	2.60
New Cuttings	1.50	@	1.75
Extra No. 1 old	1.25	@	1.35
Print	.60	@	.65
Bogus Wrapper	.60	@	.65
Container	.40	@	.50
Old Kraft Machine—			
Compressed bales	1.50	@	1.60
News—			
No. 1 White News	1.77	@	1.87
Strictly Overissue	.50	@	.55
Strictly Folded	.40	@	.45
No. 1 Mixed Paper	.22	@	.27
Common Paper	.15	@	.20

Do your part for humanity

—tell people that cancer in its early stages is curable, in its late stages is not curable.

The odds are always against your having cancer—but make sure. Consult your physician yourself, urge others to do so.

This work is made possible by generous public support of the sale of the little Christmas book and by voluntary contributions. Our work for 1930 depends on your continued help.

For further information and free literature, address

HELP CONTROL CANCER

THE NEW YORK CITY COMMITTEE
American Society for the Control of Cancer
34 EAST 75TH STREET, NEW YORK

West Virginia Pulp nd Paper Company

Manufacturers of

SUPERCALENDERED and MACHINE FINISHED BOOK and LITHOGRAPHIC PAPERS

Offset, Envelope, Bond, Writing, Cover and Music Paper, High Grade Coated Book, Index Bristol, Post Card, Kraft and Label Papers.

also

Bleached Spruce Sulphite and Soda, Kraft Pulp

230 Park Ave. New York — 35 East Wacker Drive Chicago
503 Market St., San Francisco, Cal.
Sixth and Chestnut Sts., Philadelphia, Pa.

RENEWABLE SEMI-STEEL GATE VALVES

Stationary or Rising Spindle. Designed with strength adequate to resist pipe strains developed at the maximum steam pressures for which they are recommended. All parts are interchangeable. Stuffing Box may be packed under pressure. Renewability may be accomplished with minimum cost and effort. Furnished with malleable iron seat rings for Paper Mill Work.

Write for Complete Catalog No. 20

The FAIRBANKS Company
BOSTON NEW YORK PITTSBURGH
Distributors Everywhere

WOOD PULP AGENTS

PRICE & PIERCE, Ltd.,

17 EAST 42ND ST.
NEW YORK

Twines
(F. o. b. Mill)

Cotton—			
No. 1	.39	@	.40
No. 2	.37	@	.38
No. 3	.36	@	.37
B. C., 18 basis	.38	@	.40
A. B. Italian, 18 basis	.48	@	.53
Finished Jute—			
Dark 18 basis	.24	@	.25
Light 18 basis	.27	@	.28
Jute Wrappings, 3-6 Ply—			
No. 1	.19	@	.21
No. 2	.18	@	.20
Tube Rope—			
4-ply and larger	.16	@	.17
Fine Tube Yarn—			
5-ply and larger	.21	@	.25
4-ply	.25	@	.29
3-ply	.28	@	.32
Unfinished India—			
Basis	.13	@	.14
Paper Makers Twine Balls	.11	@	.12
Box Twine, 2-3 ply	.15	@	.17
Jute Rope	.17	@	.19
Amer. Hemp, 6	.29	@	.31
Sisal Hay Rope—			
No. 1 Basis	.16	@	.18
No. 2 Basis	.14	@	.16
Sisal Lath Yarn—			
No. 1	.14	@	.16
No. 2	.12	@	.14
Manila Rope	.22	@	.24

CHICAGO

Paper
(F. o. b. Mill)

Rag Bond	.30	@	.53¼
Water Marked Sulphite Bond	.09	@	.12
Sulphite Bond	.06¼	@	.11
Superfine writing	.18	@	.24
No. 1 fine writing	.14	@	.18
No. 2 fine writing	.12	@	.14
No. 3 fine writing	.08½	@	.12
No. 1 M. F. Book	.06½	@	.07¼
No. 2 M. F. Book	.05¼	@	.06¼
No. 1 S.&S.C. Book	.06¼	@	.07¼
No. 2 S.&S.C. Book	.05¼	@	.06½
Coated Book	.07½	@	.12
Coated Label	.07½	@	.10
No. 1 Manila	.04¼	@	.05¼
No. 1 Fibre	.04¼	@	.05¼
No. 2 Manila	.04¼	@	.04¾
Butcher's Manila	.04	@	.04½
No. 1 Kraft	5.00	@	5.50
Southern Kraft	3.75	@	4.00
No. 2 Kraft	3.75	@	4.00
Wood Tag Boards	.04¼	@	.06¼
Sulphite Sreenings	.03	@	.03¾
Manila Tissue—			
24x36 Sheet	.07	@	.07¼
White Tissue—			
20x30 Sheet	.07¼	@	.07½
(Delivered Central Territory)			
News, per ton—			
Rolls, contract	62.00	@	—
Sheets	67.00	@	—
Boards, per ton—			
Plain Chip	37.50	@	42.50
Solid News	47.50	@	—
Solid News	40.00	@	45.00
Manila Lined Chip	50.00	@	55.00
Container Lined—			
85 Test	65.00	@	70.00
100 Test	70.00	@	—

Old Papers
(F. o. b. Chicago)

Shavings—			
No. 1 Hard White	2.35	@	2.40
White Env. Cut			
No. 1 Soft Shavings	2.10	@	2.15
No. 1 Mixed	.30	@	.35
No. 2 Mixed	.25	@	.35
Ledger & Writings	1.25	@	1.35
Solid Books	1.05	@	1.10
Blanks	1.60	@	1.65
Krafts	1.30	@	1.40
New Kraft Cuts	1.50	@	1.70
Manila Envelope Cuttings	1.65	@	1.70
Ex. No. 1 Manila	1.30	@	1.45
Print Manila	.45	@	.50
Folded News (overissue	.40	@	.45
Old Newspapers—			
No. 1	.35	@	.40
No. 2	.30	@	.35
Mixed Papers—			
No. 1	.30	@	.35
Roofing Stocks—			
(F. o. b. Chicago, net cash)			
No. 1	30.00	@	—
No. 2	28.00	@	—

PHILADELPHIA

Paper
(F. o. b. Mill)

Bonds	.05	@	.40
Ledgers	.08	@	.40
Writings—			
Superfine	.12½	@	.18
Extra fine	.18	@	.22
Fine	.17	@	.26
Fine, No. 2	.15	@	.25
Fine, No. 3	.09	@	.20
Book, M. F.	.05	@	.07
Book, S. S. & C.	.05	@	.07½
Book, Coated	.09	@	.16
Coated Lithograph	.07	@	.11
Label	.07	@	.11
No. 1 Jute Manila	.07	@	.09
Manila Sul., No. 1	.03½	@	.05½
Manila No. 2	.03	@	.04
No. 1 Kraft	.05¼	@	.06¼
No. 2 Kraft	.03¾	@	.04½
Southern Kraft No. 1	—	@	.03¾
Southern Kraft No. 2	—	@	.03½
Common Bogus	.03½	@	.04
(Delivered Philadelphia)			
News Print Rolls	62.00	@	—
Straw Board	52.50	@	70.00
News Board	37.50	@	38.50
Chip Board	32.50	@	35.00
Wood Pulp Board	85.00	@	95.00
Binder Boards—			
No. 1, per ton	75.00		
No. 2, per ton	70.00		
Carload lots	68.00	@	70.00
Tarred Felts—			
Regular	55.50	@	57.00
Slaters (per roll)	.84	@	.94
Best Tarred, 1-ply (per roll)	1.95	@	2.10
Best Tarred, 2-ply (per roll)	1.50	@	1.60
Best Tarred, 3-ply	2.00	@	2.25

Domestic Rags (New)
(Price to Mill, f. o. b. Phila.)

Shirt Cuttings—			
New White, No. 1	.10½	@	.11
New White, No. 2	.07	@	.07½
Light Silesias	.07	@	.07½
Silesias, No. 1	.07	@	.09
Black Silesia, soft	.05	@	.05½
New Unbleached	.10½	@	.11
Washable, No. 1	.04½	@	.05
Blue Overall	.07½	@	.08
Cottons—According to grades—			
Washable, No. 2	.03	@	—
New Blue	.03	@	.03½
Fancy	.05½	@	.06
New Black Soft	.05	@	.05¾
New Light Seconds	.02½	@	.03
New Dark Seconds	1.85	@	2.00
Khaki Cuttings—			
No. 1 O. D.	.05½	@	.05¾
No. 2 Mixed	.04½	@	.04¾
Corduroy	.03	@	.03½
New Canvas	.08½	@	.09
New Black Mixed	.03¾	@	.04½

Bagging
(F. o. b. Phila.)

Gunny, No. 1—			
Foreign	1.50	@	1.60
Domestic	1.75	@	—
Manila Rope	3.50	@	4.00
Sisal Rope	1.50	@	—
Mixed Rope	1.10	@	1.25
Scrap Burlaps—			
No. 1	1.50	@	1.60
No. 2	1.10	@	1.20
Wool Tares, heavy	3.00	@	—
Mixed Strings	1.15	@	1.25
No. 1, New Light Burlap	2.50	@	2.75
New Burlap Cuttings	2.00	@	2.25

Old Papers
(F. o. b. Phila.)

Shavings—			
No. 1 Hard White	2.65	@	2.75
No. 2 Hard White	2.30	@	2.50
No. 1 Soft White	2.25	@	2.50
No. 2 Soft White	1.40	@	1.60
No. 1 Mixed	.90	@	1.00
No. 2 Mixed	.60	@	.70
Solid Ledger Stock	1.55	@	1.65
Writing Paper	1.05	@	1.25
No. 1 Books, heavy	1.00	@	1.20
No. 2 Books, light	.90	@	1.00
No. 1 New Manila	2.15	@	2.30
No. 1 Old Manila	1.50	@	1.60
Print Manila	.50	@	.60
Container Manila	.45	@	.50
Old Kraft	1.35	@	1.40
Common Paper	.25	@	.35
No. 1 Mixed Paper	.25	@	.30
Straw Board, Chip	.35	@	.40
Binders Board, Chip	.35	@	.45
Corrugated Board	.50	@	.60
Overissue News	.45	@	.50
Old Newspaper	.25	@	.30

Domestic Rags (Old)

White No. 1—			
Repacked	4.25	@	4.50
Miscellaneous	3.50	@	3.75
M. G.	6.00	@	—
Thirds and Blues—			
Repacked	2.00	@	2.25
Miscellaneous	1.60	@	1.80
Black Stockings (Export)	3.90	@	4.25
Roofing Stock—			
Foreign No. 1	1.25	@	1.30
Repacked	.80	@	.90
No. 2	.70	@	.75
No. 3 (Roofing)	.30	@	.40
No. 4	.30	@	.40
No. 5A	.70	@	.75
B	.40	@	.60
C	.25	@	.30

BOSTON

Paper
(F. o. b. Mill)

Ledgers—			
Sulphite	.07½	@	.12½
Rag content	.15	@	.30
All rag	.38	@	.52½
Bonds—			
Sulphite	.06½	@	.11½
Rag content	.15	@	.30
All rag	.36½	@	.65
Writings	.06½	@	.20
Superfines	.11	@	.31
Book, Super	.06	@	.09
Book, M. F.	.05½	@	.08½
Book, Coated	.08½	@	.18
Coated Litho	.09	@	.12
Label	.09½	@	.15
Jute Manila No. 1	.11	@	.13
Manila, Sul. No. 1	.04¾	@	.06½
Manila, Sul. No. 2	.03¾	@	.04½
No. 1 Kraft	.04¾	@	.06
No. 2 Kraft	.03¾	@	.05
(Less car-freight to Boston)			
Southern Kraft	.03¾	@	.04¼
(F. o. b. destination in carload lots, f. o. b. mill in less than carload lots.)			
Common Bogus	.02	@	.02¾
Delivered New England points			
News Print Rolls	61.50	@	—
Straw Boards, rolls	.009		52.50
Straw Board in Sheets, basis 35s to 70s	54.50	@	55.00
Filled News Board	37.50	@	40.00
Chip Board	35.00	@	37.50
Single Manila Lined Chip	47.50	@	52.50
Single White, Patent Coated Newsboard Bender	65.00	@	80.00
Wood Pulp Board	75.00	@	80.00
Binder Boards	70.00	@	75.00
(F. o. b. Mill)			
Tarred Felts—			
Regular, carload lots	65.00	@	—

Old Papers
(F. o. b. Boston)

Shavings—			
No. 1 Hard White	3.25	@	3.75
No. 2 Hard White	2.60	@	2.90
No. 1 Soft White	2.50	@	2.60
No. 1 Mixed	1.10	@	1.15
No. 2 Mixed	.85	@	.90
Solid Ledger Stock	—	@	2.25
No. 1 Books, Heavy	1.30	@	—
No. 1 Books, Light	1.05	@	—
Manila Env. Cuttings	2.00	@	2.25
No. 1 Old Manila	.90	@	1.00
White Blank News	1.50	@	1.60
Old Kraft	1.35	@	1.45
Print Manila	.75	@	.80
No. 1 Mixed Paper	.20	@	.25
Overissue News	.45	@	.50
Old Newspapers	.37½	@	.40
Box Board, Chip	.50	@	.55
Corrugated Boxes	—	@	.45

Bagging
(F. o. b. Boston)

Gunny No. 1—			
Foreign	1.50	@	1.65
Domestic	1.50	@	—
Manila Rope—			
Foreign	3.00	@	3.25
Domestic	—	@	3.50
Transmission Rope	2.35	@	2.50
Mixed Strings	.90	@	1.00
Jute Wool Strings	.90	@	1.00
Jute Carpet Threads	1.00	@	1.10
Scrap Burlaps	1.25	@	1.40
Scrap Sisal	1.50	@	1.65
Scrap Sisal for shredding	1.75	@	2.00
Wool Tares, heavy	1.60	@	—
New Burlap Cutting	1.75	@	2.00
Australian Wool Pouches	2.25	@	3.00

Domestic Rags (New)
(F. o. b. Boston)

Shirt Cuttings—			
New White No. 1	.08	@	.08½
Silesias No. 1	.06	@	.06¼
New Unbleached	—	@	.09½
Fancy	.04	@	.04½
Washable	.04	@	.04½
Cottons—According to grades			
Blue Overalls	.06¼	@	.06¾
New Black, soft	.04	@	.04½
Khaki Cuttings	.04	@	.04¾
O. D. Khaki	.05	@	—
Corduroy	.03	@	.03½
New Canvas	.08	@	.08½

Domestic Rags (Old)
(F. o. b. Boston)

Canvas	.04½	@	—
White No. 1—			
Repacked	4.75	@	5.25
Miscellaneous	5.00	@	—
White No. 2—			
Repacked	.04½	@	.05
Miscellaneous	.03½	@	.04
Twos and Blues	2.75	@	3.00
Thirds and Blues—			
Repacked	2.25	@	2.50
Miscellaneous	1.75	@	1.90
Black Stockings	—	@	4.00
Roofing Stock—			
No. 1	1.25	@	1.50
No. 2	.90	@	1.00
No. 3	.85	@	.90
No. 4	.75	@	.85

Foreign Rags
(F. o. b. Boston)

Dark Cottons	.95	@	1.00
New No. 1 Shirt Cuttings	8.50	@	9.00
Dutch Blues	2.25	@	2.50
Lace Curtains	4.50	@	4.75
New Checks & Blues	4.25	@	4.60
Old Fustians	1.90	@	2.00
Old Linsey Garments	1.20	@	—

TORONTO

Paper
(F. o. b. Mill)

Bond—			
No. 1 Sulphite	.12½	@	—
No. 2 Sulphite	.10¾	@	—
No. 1 Colored	.13½	@	—
No. 2 Colored	.11¼	@	—
Ledgers (sulphite)	—	@	—
Ledgers, No. 1	.36	@	—
Ledgers, No. 2	.27	@	—
Writing	.09½	@	.10
Book—			
No. 1 M. F. (carloads)	7.50	@	—
No. 2 M. F. (carloads)	7.25	@	—
No. 3 M. F. (carloads)	7.00	@	—
No. 1 S. C. (carloads)	8.00	@	—
No. 2 S. C. (carloads)	7.75	@	—
No. 3 S. C. (carloads)	7.50	@	—
No. 1 Coated and Litho	13.25	@	—
No. 2 Coated and Litho	12.25	@	—
No. 3 Coated and Litho	10.00	@	11.50
Coated tinted	14.50	@	—
Wrapping—			
Rag Brown	4.95	@	—
White Wrap	5.25	@	—
"B" Manila	5.00	@	—
No. 1 Manila	5.40	@	—
Fiber	5.40	@	—
Kraft, M. F.	5.90	@	—
White, No. 2	2.00	@	2.25
News, per ton—			
Rolls (contract)	61.50	@	62.00
Sheets	67.00	@	—

Pulp
(F. o. b. Mill)

Ground Wood	30.00	@	32.00
Sulphite easy bleaching	60.00	@	—
Sulphite news grade	60.00	@	—
Sulphite, bleached	72.50	@	75.00
Sulphate	60.00	@	—

Old Waste Paper
(In carload lots, f. o. b. Toronto)

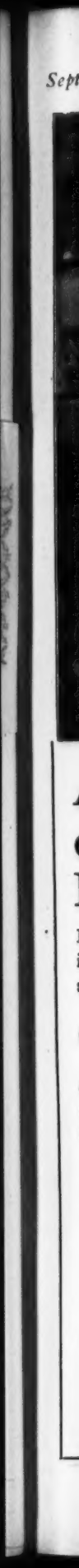
Shavings—			
White Env. Cut	3.00	@	—
Soft White Book Shavings	2.85	@	—
White Blk. News	1.60	@	—
Book and Ledger—			
Flat Magazine and Book Stock (old)	1.40	@	—
Light and Crumpled Book Stock	1.25	@	—
Ledgers and Writ-			
Solid Ledgers	1.50	@	—
Manilas—			
New Manila Cut	1.50	@	—
Printed Manilas	1.00	@	—
Kraft	2.25	@	—
News and Scrap—			
Strictly Overissue	.85	@	—
Strictly Folded	.85	@	—
No. 1 Mixed Paper	.85	@	—

Domestic Rags
(Price to mills, f. o. b. Toronto)

No. 1 White Shirt Cuttings	.09¼	@	.10
Fancy Shirt Cuttings	.06	@	.06¼

Advertising matter paged consecutively with text, has been removed here to lessen the bulk of this volume.

INDIANAPOLIS



INDIANAPOLIS
SEP 9 1930
PUBLIC LIBRARY

Avoid the Perils of "Spotty" Production

Drying Roll Temperatures exert an important influence on the production of even, high grade stock.

Cambridge Surface Pyrometer

allows you to hold every roll at the correct constant temperature, an important feature in modern progressive dryers.

The instrument is compact, handy and easy to read. The extension rod makes it safe and easy to reach far off places on moving rolls. Scale readings in plain figures 50-250° or 50-400° Fahr.

Send for list 194S

CAMBRIDGE
INSTRUMENT CO INC

Pioneer Manufacturers of Precision Instruments
3512 Grand Central Terminal, New York

PAPER TRADE JOURNAL
ESTABLISHED 1872

THE INTERNATIONAL WEEKLY OF THE PAPER AND PULP INDUSTRY AND THE PIONEER PUBLICATION IN ITS FIELD

FIFTY-NINTH YEAR

Published Every Thursday by the
LOCKWOOD TRADE JOURNAL CO., Inc.

GEO. S. MACDONALD, President: J. BANNINGA, Sec.-Treas.
Executive and Editorial Offices: 10 East 39th Street, New York
Chicago Office: 123 West Madison St.

TABLE OF CONTENTS

Copyright, 1930, by the Lockwood Trade Journal Co., Inc.

Hammermill Paper Co. Agents Meet at Erie.. 37
Ontario Mills Are Operating Lightly..... 38
Forest Fires in Algoma 38
Canadian Pulp Popular in France..... 38
To Improve A. P. W. Paper Co. Mill..... 39
Paper Mill Men Join Traffic Bureau..... 39
Curtailment of Pulpwood Operations..... 39
Wisconsin Mills to Pay Higher Freight Rates.. 40
Allan Waste Paper Co. Expands..... 40
More Paper Mill Workers Employed..... 40
Another Federal Forest for Wisconsin..... 40
Build New Hydro-Electric Power Plant..... 40
Chicago Paper Trade Bright..... 42
Chicago Salesmen's Activities..... 42
Swedish Sulphite Market Unstable..... 42
News Print Merger May be Effected..... 44
James Maclaren Co. in Big Development..... 44
Mersey Plant at Capacity..... 44
Shawinigan Co's. Large Expansion..... 44
Paper Demand Falls Off in Philadelphia..... 46
Many Paper Houses to Move 46
Safepack Mills New Product..... 46
Obituary 48
J. W. Voller Injured in Auto Accident..... 48
Construction News..... 53
Power Plant Section..... 54
New York Trade Jottings 60
Editorial 62
G. W. Sisson Jr. on Russian Pulpwood..... 63
Threatened Strike in Norway Averted..... 63
Technical Section
Rayon As A Paper Making Material..... 65
Determining Ground Wood Stock Quality.. 68
Hopper Paper Co. TAPPI Corporate Member 69
Current Paper Trade Literature..... 70
Cost Section..... 75
Imports of Paper and Paper Stock..... 80
New York Market Review..... 84
Miscellaneous Markets..... 86
Market Quotations 88

THE PAPER TRADE JOURNAL is indexed in Industrial Arts Index

Want and For Sale Advertisements, 91, 92, 93

AIR FLOATED CLAY

Competition requires the utmost in economy.

You get it in Air Floated Clay.

One mill has used it exclusively and continuously 9 years.

One mill has used it 7 years.

One mill has used it 4 years.

One mill has used it 3 years.

Investigation will convince

R. T. VANDERBILT CO.

230 Park Avenue.
New York